1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Super Glue Professional
Product type: Cyanoacrylate
Item number: 1365882
Region: United States
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067
Contact information:
Telephone: 800.624.7767
Emergency telephone: 800.424.9300
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid
Color: Clear, Colorless, Straw
Odor: Sharp, irritating

Hazardous Components

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl 2-cyanoacrylate</td>
<td>7085-85-0</td>
<td>60 - 100</td>
</tr>
<tr>
<td>Methyl methacrylate polymer</td>
<td>9011-14-7</td>
<td>5 - 10</td>
</tr>
</tbody>
</table>

Existing conditions aggravated by exposure:
Eye, skin, and respiratory disorders.

Inhalation:
Exposure to vapors above the established exposure limit results in respiratory irritation, which may lead to difficulty in breathing and tightness in the chest.

Skin contact:
Bonds skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic response is rare. Cyanoacrylates generate heat on solidification. In rare circumstances a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin.

Eye contact:
Irritating to eyes. Causes excessive tearing. Eyelids may bond.

Ingestion:
Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation:
Move to fresh air. If symptoms persist, seek medical advice.
Skin contact: Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid caused abrasive damage.

Ingestion: Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing any separated mass.

Notes to physician: Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed.

5. FIRE FIGHTING MEASURES

Flash point: 80 - 93.4 °C (176°F - 200.12 °F) Tagliabue closed cup
Autoignition temperature: 485 °C (905°F)
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Dry powder. Foam. Carbon dioxide.
Special firefighting procedures: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).
Unusual fire or explosion hazards: Not available
Hazardous combustion products: Trace amounts of toxic and/or irritating fumes may be released and the use of breathing apparatus is recommended.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.
Clean-up methods: Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists of this product. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors, and cause thermal burns.
Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl 2-cyanoacrylate</td>
<td>0.2 ppm TWA</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Methyl methacrylate polymer</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nylon or cotton.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear, Colorless, Straw</td>
</tr>
<tr>
<td>Odor</td>
<td>Sharp, irritating</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>1 - 2 ppm</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>&lt; 0.2 mm hg</td>
</tr>
<tr>
<td>Boiling point/ range</td>
<td>&gt; 149 °C (&gt; 300.2 °F)</td>
</tr>
<tr>
<td>Melting point/ range</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Approximate 3</td>
</tr>
<tr>
<td>Flash point</td>
<td>80 - 93.4 °C (176°F - 200.12 °F) Tagliabue closed cup</td>
</tr>
<tr>
<td>Flammable/Explosive limits - lower</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable/Explosive limits - upper</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>485 °C (905°F)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Polymerises in presence of water.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC content</td>
<td>&lt; 2 %; &lt; 20 g/l (California SCAQMD Method 316B) (Estimated)</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Hazardous reactions: Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.

Hazardous decomposition products: None

Incompatible materials: Water, Amines, Alkalis, Alcohols.

Conditions to avoid: Spontaneous polymerization.

11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity: LD50 (rat) > 5,000 mg/kg (Estimated)

Acute dermal product toxicity: LD50 (rabbit) > 2,000 mg/kg (Estimated)
12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Combustible liquid, n.o.s. (Ethyl cyanoacrylate)
Hazard class or division: Combustible Liquid
Identification number: NA 1993
Packing group: III
Exceptions: (Not more than 450 Liters), Not regulated

International Air Transportation (ICAO/IATA)

Proper shipping name: Aviation regulated liquid, n.o.s. (Ethyl cyanoacrylate)
Hazard class or division: 9
Identification number: UN 3334
Packing group: None
Exceptions: Primary packs containing less than 500ml are unregulated by this mode of transport and may be shipped unrestricted.

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire, Reactive
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.
Canada Regulatory Information

CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

WHMIS hazard class: B.3, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: First issue.

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Super Glue Ultra Gel Control
Product type: Cyanoacrylate
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>%</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>60-100</td>
<td>0.2 ppm TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Thickener</td>
<td>5-10</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Treated fumed silica</td>
<td>1-5</td>
<td>10mg/m³ Inhalable fraction, 3mg/m³ Respirable dust, 5mg/m³ Respirable dust, 15mg/m³ Total dust</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:
Physical state: Liquid
Color: Colorless
Odor: Sharp, Irritating

HEALTH: 2
FLAMMABILITY: 2
PHYSICAL HAZARD: 1
Personal Protection: See Section 8

WARNING: BONDS SKIN IN SECONDS. MAY CAUSE EYE AND RESPIRATORY IRRITATION. COMBUSTIBLE LIQUID AND VAPOR.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: Exposure to vapors above the established exposure limit results in respiratory irritation which may lead to difficulty in breathing and tightness in the chest.

Skin contact: Bonds skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic response is rare. Cyanoacrylates generate heat on solidification. In rare circumstances a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin.

Eye contact: Irritating to eyes. Causes excessive tearing. Eyelids may bond.

Ingestion: Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.
4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If discomfort persists seek medical attention.

Skin contact: Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid caused abrasive damage.

Ingestion: Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing any separated mass.

Notes to physician: Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed.

5. FIRE-FIGHTING MEASURES

Flash point: 80°C (176°F) to 93.4°C (200°F) Tagliabue closed cup

Autoignition temperature: 485°C (905°F)

Flammable/Explosive limits-lower %: Not determined

Flammable/Explosive limits-upper %: Not determined

Extinguishing media: Dry powder. Foam. Carbon dioxide.

Special fire fighting procedures: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).

Unusual fire or explosion hazards: None

Hazardous combustion products: Trace amounts of toxic and/or irritating fumes may be released and the use of breathing apparatus is recommended.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Ventilate area. Prevent product from entering the drains.

Clean-up methods: Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors, and cause thermal burns.

Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

Incompatible products: No special restrictions on storage with other products.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Item No.: 1363589 Product name: Loctite Super Glue Ultra Gel Control
Engineering controls: Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Skin protection: Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nylon or cotton.

Eye/face protection: Chemical splash goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor:</td>
<td>Sharp, Irritating</td>
</tr>
<tr>
<td>Odor Threshold:</td>
<td>1-2 ppm</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Less than 0.2 mm Hg</td>
</tr>
<tr>
<td>Boiling point/range:</td>
<td>Greater than 149°C (300°F)</td>
</tr>
<tr>
<td>Melting point/range:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>?</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>Approximately 3</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>Polymerizes in presence of water</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>VOC content:</td>
<td>Less than 2%; 20 g/L (California SCAQMD Method 316B) (estimated)</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions

Hazardous polymerization: Rapid exothermic polymerization will occur in the presence of water, amines, alkalies and alcohols.

Hazardous decomposition products: None

Incompatibility: Water, amines, alkalies and alcohols.

Conditions to avoid: Spontaneous polymerization

11. TOXICOLOGICAL INFORMATION

Product toxicity data: Acute oral LD50 >5000mg/kg (rat)(estimated). Acute dermal LD50 >2000mg/kg (rabbit)(estimated).

Carcinogen Status

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate 7085-85-0</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Thickener Unknown</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Treated fumed silica 87762-90-7</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Literature Referenced Target Organ & Other Health Effects

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate 7085-85-0</td>
<td>Allergen, Irritant, Respiratory</td>
</tr>
<tr>
<td>Thickener Unknown</td>
<td>No data</td>
</tr>
<tr>
<td>Treated fumed silica 87762-90-7</td>
<td>Irritant</td>
</tr>
</tbody>
</table>

Item No. : 1363589 Product name: Loctite Super Glue Ultra Gel Control
12. ECOLOGICAL INFORMATION

Ecological information: Not known

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of in accordance with Federal, State and local regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR):

Proper shipping name: Combustible liquids, n.o.s. (Cyanoacrylate ester)
Hazard class or division: 3
Identification number: NA 1993
Packing group: None
Exceptions: (Not more than 450 Liters) Unrestricted
Marine pollutant: None

International Air Transportation (ICAO/IATA):

Proper shipping name: Aviation regulated liquids, n.o.s (Cyanoacrylate ester)
Hazard class or division: 9
Identification number: UN 3334
Packing group: None
Exceptions: (Not more than 500ml) Unrestricted

WaterTransportation (IMO/IMDG):

Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None
Packing group: None
Marine pollutant: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: Not available.

CERCLA/SARA Section 302 EHS: None.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard, Fire, Reactive
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). None.

California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic Substances list. Those components must be tracked by all Canadian Importers of Record as required by the Canadian Environmental Protection Agency. They may be imported into Canada in limited quantities. Please contact Product Safety and Regulatory Affairs for details.

WHMIS hazard class: B.3, D.2.B
16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: First issue.

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Super Glue Gel Control
Product type: Cyanoacrylate
Company address: Henkel Corporation
            One Henkel Way
            Rocky Hill, Connecticut 06067

Item No.: 234790
Region: United States

Contact Information:
Telephone: 800.624.7767
Emergency telephone: 800.424.9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>%</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>7085-85-0</td>
<td>60-100</td>
<td>0.2 ppm TWA</td>
<td>None</td>
</tr>
<tr>
<td>Thickener</td>
<td>5-10</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Thickener</td>
<td>Unknown</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Treated fumed silica 67762-90-7

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:
Physical state: Liquid
Color: Colorless
Odor: Sharp, Irritating

HEALTH: 2
FLAMMABILITY: 2
PHYSICAL HAZARD: 1
Personal Protection: See Section 8

WARNING: BONDS SKIN IN SECONDS. MAY CAUSE EYE AND RESPIRATORY IRRITATION. COMBUSTIBLE LIQUID AND VAPOR.

Relevant routes of exposure:
Skin, Inhalation, Eyes

Potential Health Effects

Inhalation:
Exposure to vapors above the established exposure limit results in respiratory irritation which may lead to difficulty in breathing and tightness in the chest.

Skin contact:
Bonds skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic response is rare. Cyanoacrylates generate heat on solidification. In rare circumstances a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin.

Eye contact:
Irritating to eyes. Causes excessive tearing. Eyelids may bond.

Ingestion:
Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

Existing conditions aggravated by exposure:
Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.
4. FIRST AID MEASURES

**Inhalation:** Remove to fresh air. If discomfort persists seek medical attention.

**Skin contact:** Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid caused abrasive damage.

**Ingestion:** Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing any separated mass.

**Notes to physician:** Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed.

5. FIRE-FIGHTING MEASURES

**Flash point:** 80°C (176°F) to 93.4°C (200°F)  Tagliabue closed cup

**Autoignition temperature:** 485°C (905°F)

**Flammable/Explosive limits-lower %:** Not determined

**Flammable/Explosive limits-upper %:** Not determined

**Extinguishing media:** Dry powder. Foam. Carbon dioxide.

**Special fire fighting procedures:** Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).

**Unusual fire or explosion hazards:** None

**Hazardous combustion products:** Trace amounts of toxic and/or irritating fumes may be released and the use of breathing apparatus is recommended.

6. ACCIDENTAL RELEASE MEASURES

**Environmental precautions:** Ventilate area. Prevent product from entering the drains.

**Clean-up methods:** Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste.

7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors, and cause thermal burns.

**Storage:** Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

**Incompatible products:** No special restrictions on storage with other products.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION
Engineering controls: Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Skin protection: Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nylon or cotton.

Eye/face protection: Chemical splash goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Colorless
Odor: Sharp, Irritating
Odor Threshold: 1-2 ppm
Vapor pressure: Less than 0.2 mm Hg
pH: Not applicable
Boiling point/range: Greater than 149°C (300°F)
Melting point/range: Not determined
Specific gravity: .?
Vapor density: Approximately 3
Evaporation rate: Not available
Solubility in water: Polymerizes in presence of water
Partition coefficient (n-octanol/water): Not applicable
VOC content: Less than 2%; 20 g/L (California SCAQMD Method 316B) (estimated)

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions
Hazardous polymerization: Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.
Hazardous decomposition products: None
Incompatibility: Water, amines, alkalis and alcohols.
Conditions to avoid: Spontaneous polymerization

11. TOXICOLOGICAL INFORMATION

Product toxicity data: Acute oral LD50 >5000mg/kg (rat)(estimated). Acute dermal LD50 >2000mg/kg (rabbit)(estimated).

Carcinogen Status

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
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<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>7085-85-0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thickener</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treated fumed silica</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>87762-90-7</td>
<td></td>
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<td></td>
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</tbody>
</table>

Literature Referenced Target Organ & Other Health Effects

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
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<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>Allergen, Irritant, Respiratory</td>
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<tr>
<td>Thickener</td>
<td>No data</td>
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<td>Unknown</td>
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<tr>
<td>Treated fumed silica</td>
<td>Irritant</td>
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<tr>
<td>87762-90-7</td>
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</tr>
</tbody>
</table>
12. ECOLOGICAL INFORMATION

Ecological information: Not known

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of in accordance with Federal, State and local regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR):
- Proper shipping name: Combustible liquids, n.o.s. (Cyanoacrylate ester)
- Hazard class or division: 3
- Identification number: NA 1993
- Packing group: None
- Exceptions: (Not more than 450 Liters) Unrestricted
- Marine pollutant: None

International Air Transportation (ICAO/IATA):
- Proper shipping name: Aviation regulated liquids, n.o.s (Cyanoacrylate ester)
- Hazard class or division: 9
- Identification number: UN 3334
- Packing group: None
- Exceptions: (Not more than 500ml) Unrestricted

WaterTransportation (IMO/IMDG):
- Proper shipping name: Unrestricted
- Hazard class or division: None
- Identification number: None
- Packing group: None
- Marine pollutant: None

15. REGULATORY INFORMATION

United States Regulatory Information
- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12 (b) Export Notification: Not available.
- CERCLA/SARA Section 302 EHS: None.
- CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard, Fire, Reactive
- CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). None.
- California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information
- CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic Substances list. Those components must be tracked by all Canadian Importers of Record as required by the Canadian Environmental Protection Agency. They may be imported into Canada in limited quantities. Please contact Product Safety and Regulatory Affairs for details.
- WHMIS hazard class: B.3, D.2.B
16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: First issue.

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation’s products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation’s products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: LOCTITE Precision Max Super Glue

IDH: 234796

Product Type: Cyanoacrylate ester

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients | CAS No. | %
--- | --- | ---
Ethyl cyanoacrylate | 7085-85-0 | 60-100

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Exposure Limits (TWA)</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingredients</td>
<td>(TLV)</td>
<td>(PEL)</td>
<td></td>
</tr>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>0.2 ppm TWA</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Toxicity: Skin contact may cause burns. Bonds skin rapidly and strongly. Skin and eye irritant. Estimated oral LD50 more than 5000mg/kg. Estimated dermal LD 50 more than 2000 mg/kg.

Primary Routes of Entry: None known

Signs and Symptoms of Exposure: Vapor is irritating to eyes and mucous membranes above TLV. Prolonged and repeated overexposure to vapors may produce symptoms of non-allergic asthma in sensitive individuals.

Existing Conditions Aggravated by Exposure: None known

Literature Referenced

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Target Organ and Other Health Effects</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>ALG IRR RES</td>
<td>NO NO NO</td>
</tr>
</tbody>
</table>

Abbreviations

N/A Not Applicable
ALG Allergen    IRR Irritant
MUT Mutagen     RES Respiratory
4. FIRST AID MEASURES

Ingestion: Ingestion is not likely. See supplemental page for emergency procedures.
Inhalation: Remove to fresh air. If symptoms persist, obtain medical attention.
Skin Contact: Soak in warm water. See supplemental page for emergency procedures.
Eye Contact: Flush with water. See supplemental page for emergency procedures.

5. FIRE FIGHTING MEASURES

Flash Point: 176 – 93.4øF Method: Tag Closed Cup
Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical
Special Firefighting Procedures: Firefighters should wear positive pressure SCBA
Hazardous Products formed by Fire or Thermal Decomp Irritating organic vapors
Unusual Fire or Explosion Hazards: None

Explosive Limits:
(% by volume in air)Lower Not available
(% by volume in air)Upper Not available

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Flood with water to polymerize. Soak up with an inert absorbent.

7. HANDLING AND STORAGE

Safe Storage: Store at or below 75øF
(Contact Loctite Customer Service 1-800-243-4874 for shelf life information)
Handling: Avoid contact with skin and eyes. Avoid breathing vapor.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Nitrile or polyethylene gloves and aprons.
Do not use cotton.
See supplemental page for additional information.
Ventilation: Positive down-draft exhaust ventilation should be provided to maintain vapor concentration below TLV
Respiratory Not available
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear colourless to straw liquid
Odor: Sharp, irritating
Boiling Point: More than 300øF
pH: Does not apply
Solubility in Water: Polymerized by water
Specific Gravity 1.05
Volatile Organic Compound (EPA Method 24) Less than 20 g/L (California SCAQMD Method 316)est.
Vapor Pressure: Less than 0.2 mm
Vapor Density: Approximately 3
Evaporation Rate (Ether = 1) Not available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: Polymerized by contact with water, alcohols, amines, alkalies.
Conditions to Avoid: Not available
Hazardous Decomposition Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

See Section 3.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Polymerize as above. Incinerate following EPA and local regulations.

EPA Hazardous Waste Number NH - Not a RCRA Hazardous Waste Material
14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)

Domestic Ground Transport

Proper Shipping Name: Unrestricted (Not more than 450 liters);
Combustible liquids, n.o.s. (Cyanoacrylate ester)
(More than 450 liters)

Hazard Class or Division: Unrestricted (Not more than 450 liters)
Combustible liquid (More than 450 liters)

Identification Number: None (Not more than 450 liters);
NA 1993 (More than 450 liters)

Marine Pollutant: None

IATA

Proper Shipping Name: Unrestricted (Not more than one pint);
Aviation regulated liquid, n.o.s., (Cyanoacrylate Ester) (More than one pint)

Class or Division: Unrestricted (Not more than one pint);
Class 9 (More than one pint)

UN or ID Number: None (Not more than one pint)
UN 3334 (More than one pint)

15. REGULATORY INFORMATION

CA Proposition 65: No California Proposition 65 chemicals are known to be present.

16. OTHER INFORMATION

Estimated NFPA(R) Code:

Health Hazard: 2
Fire Hazard: 2
Reactivity Hazard: 1
Specific Hazard: Does not apply

Estimated HMIS(R) Code:

Health Hazard: 2
Flammability Hazard: 2
Reactivity Hazards: 1
Personal Protection: See Section 8.

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared by:
Company: Regulatory Affairs (440) 937-7000
INFORMATION FOR FIRST AID AND CASUALTY ON TREATMENT FOR ADHESION OF HUMAN SKIN TO ITSELF IF CAUSED BY CYANOACRYLATE ADHESIVES

Cyanoacrylate adhesive is a very fast setting and strong adhesive. It bonds human tissue including skin in seconds. Experience has shown that accidents due to cyanoacrylates are handled best by passive, nonsurgical first aid. Treatment of specific types of accidents are given below.

SKIN CONTACT
Remove excess adhesive. Soak in warm, soapy water. The adhesive will come loose from the skin in several hours. Cured adhesive does not present a health hazard even when bonded to the skin.

Avoid contact with clothes, fabrics, rags, or tissue. Contact with these materials may cause polymerization. The polymerization of large amounts of adhesive will generate heat causing smoke, skin burns, and strong, irritating vapors. Wear nitrile or polyethylene gloves and apron when handling large amounts of adhesive.

SKIN ADHESION
First immerse the bonded surfaces in warm, soapy water. Peel or roll the surfaces apart with the aid of a blunt edge, e.g. a spatula or a teaspoon handle; then remove adhesive from the skin with soap and water. Do not try to pull surfaces apart with a direct opposing action.

EYELID TO EYELID OR EYEBALL ADHESION
In the event that eyelids are stuck together or bonded to the eyeball, wash thoroughly with warm water and apply a gauze patch. The eye will open without further action, typically in 1-4 days. There will be no residual damage. Do not try to open the eyes by manipulation.

ADHESIVE ON THE EYEBALL
Cyanoacrylate introduced into the eyes will attach itself to the eye protein and will disassociate from it over intermittent periods, generally covering several hours. This will cause periods of weeping until clearance is achieved. During the period of contamination, double vision may be experienced together with a lachrymatory effect, and it is important to understand the cause and realize that disassociation will normally occur within a matter of hours, even with gross contamination.
Product Name: LOCTITE Precision Max Super Glue
IDH: 234796

MOUTH
If lips are accidentally stuck together, apply lots of warm water to
the lips and encourage maximum wetting and pressure from saliva inside
the mouth. Peel or roll lips apart. Do not try to pull the lips with direct
opposing action.

It is almost impossible to swallow cyanoacrylate. The adhesive
solidifies and adheres in the mouth. Saliva will lift the adhesive in
one half to two days. In case a lump forms in the mouth, position the
patient to prevent ingestion of the lump when it detaches.

BURNS
Cyanoacrylates give off heat on solidification. In rare cases a large
drop will increase in temperature enough to cause a burn.
Burns should be treated normally after the lump of cyanoacrylate is
released from the tissue as described above.

SURGERY
It should never be necessary to use such a drastic method to separate.accidently bonded skin.
CONSUMER MATERIAL SAFETY DATA SHEET
NAME OF PRODUCT: Loctite Super Glue Gel Professional
MSDS DATE: 03/18/2010

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Loctite Super Glue Gel 10g
SUPPLIER: Henkel Corporation
ADDRESS: 32150 Just Imagine Drive
Avon, Ohio 44011

DOMESTIC EMERGENCY PHONE: Chemtrec 1-800-424-9300
In Canada Canutec 613-996-6666
OTHER CALLS: Regulatory Affairs 440-937-7000
FAX PHONE: Regulatory Affairs 440-937-7077
CHEMICAL FAMILY: Cyanoacrylates
PRODUCT USE: Consumer Product; Super Glue
PREPARED BY: Regulatory
MSDS PREPARATION DATE: 03/18/2010

SECTION 1 NOTES: Household Super Glue

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>%</th>
<th>CAS NO.</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>60-100</td>
<td>7085-85-0</td>
<td>None</td>
<td>0.2ppm TWA</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: BONDS SKIN IN SECONDS
MAY CAUSE EYE AND RESPIRATORY IRRITATION
COMBUSTIBLE LIQUID AND VAPOR

ROUTES OF ENTRY:
oral, dermal, inhalation

POTENTIAL HEALTH EFFECTS
EYES: Irritating to the eyes. Causes excessive tearing. Eyelids may bond.
SKIN: Bonds skin in seconds. May cause skin irritation.
Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic reaction is rare. Cyanoacrylates generate heat on solidification. In rare circumstances, a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin.

INGESTION: Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

INHALATION: Exposure to vapors above established exposure limit results in respiratory irritation which may lead to difficulty in breathing and tightness in the chest.
SECTION 4: FIRST AID MEASURES

EYES: Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect, which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid cause abrasive damage.

SKIN: Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.

INGESTION: Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing by separating mass.

INHALATION: Remove to fresh air. If discomfort persists seek medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

NFPA HAZARD CLASSIFICATION

HEALTH: FLAMMABILITY: REACTIVITY: <2,2,1>
EXTINGUISHING MEDIA: Foam, CO2, Dry chemical (B-C)
FLASHPOINT: 65C-93.4C (150F-200F)
UNUSUAL FIRE AND EXPLOSION HAZARDS: None

SPECIAL FIREFIGHTING PROCEDURES: Firefighters should wear positive pressure self-contained breathing apparatus (SCBA).
HAZARDOUS DECOMPOSITION PRODUCTS: Trace amount of toxic or irritating fumes may be released and the use of breathing apparatus is recommended.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Ventilate area. Prevent product from entering the drains. Do not use cloth for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured materials can be disposed of as non-hazardous wastes.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors and cause thermal burns.

See label on product for use directions.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use positive downdraft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

RESPIRATORY PROTECTION: Use NIOSH approved respirator if there is potential to exceed exposure limits.

EYE PROTECTION: Chemical splash goggles or safety glasses with side shields.

SKIN PROTECTION: Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nylon or cotton.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- **APPEARANCE:** Colorless gel.
- **ODOR:** Sharp, irritating.
- **PHYSICAL STATE:** Gel
- **pH AS SUPPLIED:** Not applicable.
- **SPECIFIC GRAVITY (H2O = 1):** 1.1
- **SOLUBILITY IN WATER:** Polymerizes in presence of water.
- **EVAPORATION RATE:** Not available
- **BOILING POINT:** > 149°C (300°F)
- **VAPOR PRESSURE:** <0.2 mm Hg
- **% VOC**
  - 20g/L (California SCAQMD Method 316B (estimated))

SECTION 10: STABILITY AND REACTIVITY

- **STABILITY:** Stable under recommended storage conditions.
- **CONDITIONS TO AVOID:** Spontaneous polymerization.
- **HAZARDOUS POLYMERIZATION:** Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.
- **INCOMPATIBILITY:** Water, amines, alkalis and alcohols.

SECTION 11: TOXICOLOGICAL INFORMATION

- **TOXICOLOGICAL INFORMATION:** Acute oral LD50 > 5000 mg/kg, rat (estimated). LD50 > 2000 mg/kg, rabbit (estimated).

See also Section 3 Hazard Identifications.

SECTION 11 NOTES: Contact Regulatory Affairs if further information is required.

SECTION 12: ECOLOGICAL INFORMATION

- **ECOLOGICAL INFORMATION:** No data available.
SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose in accordance with federal, state or local regulations.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: Combustible liquids N.O.S (Cyanoacrylate ester)
HAZARD CLASS: 3
UN NUMBER: NA 1993
PACKING GROUP: III
EXCEPTIONS: (Not more than 450L) Unrestricted
MARINE POLLUTANT: None

NOTE: This product classifies as a Consumer Commodity due to its size and intended use. ORM-D

INTERNATIONAL AIR TRANSPORTATION (ICAO/IATA)

PROPER SHIPPING NAME: Aviation regulated liquids N.O.S (Cyanoacrylate ester)
HAZARD CLASS: 9
UN NUMBER: UN3334
PACKING GROUP: III
EXCEPTIONS: (Not more than 500ml). Unrestricted.

WATER TRANSPORTATION (IMO/IMDG)

PROPER SHIPPING NAME: Unrestricted.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

This product has been labeled according to the Federal Hazardous Substances Act and the associated Consumer Product Safety Regulations.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: Information provided in this MSDS is intended to provide supplementary information for consumer uses of this product. This product is not intended for industrial uses.

Contact Regulatory Affairs for additional information

DISCLAIMER: The information appearing herein is furnished without express or implied warranty and is based upon tests and data believed to be accurate to the best knowledge of Henkel Consumer
Adhesives Inc. It is the user's responsibility to ensure that the product is handled safely and that the instructions for use are properly communicated and followed. Henkel Corporation assumes no legal responsibility or liability for any use not in accordance with the use described in this MSDS or in the product labeling.
CONSUMER MATERIAL SAFETY DATA SHEET

NAME OF PRODUCT: Loctite Super Glue Gel Professional
MSDS DATE: 03/18/2010

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Loctite Super Glue Gel 10g
SUPPLIER: Henkel Corporation
ADDRESS: 32150 Just Imagine Drive
Avon, Ohio 44011

DOMESTIC EMERGENCY PHONE: Chemtrec 1-800-424-9300
In Canada Canutec 613-996-6666
OTHER CALLS: Regulatory Affairs 440-937-7000
FAX PHONE: Regulatory Affairs 440-937-7077
CHEMICAL FAMILY: Cyanoacrylates
PRODUCT USE: Consumer Product; Super Glue
PREPARED BY:
MSDS PREPARATION DATE: 03/18/2010

SECTION 1 NOTES: Household Super Glue

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

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<tbody>
<tr>
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<td>60-100</td>
<td>7085-85-0</td>
<td>None</td>
<td>0.2ppm TWA</td>
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</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: BONDS SKIN IN SECONDS
MAY CAUSE EYE AND RESPIRATORY IRRITATION
COMBUSTIBLE LIQUID AND VAPOR

ROUTES OF ENTRY: oral, dermal, inhalation

POTENTIAL HEALTH EFFECTS

EYES: Irritating to the eyes. Causes excessive tearing. Eyelids may bond.

SKIN: Bonds skin in seconds. May cause skin irritation..
Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic reaction is rare. Cyanoacrylates generate heat on solidification. In rare circumstances, a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin.

INGESTION: Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

INHALATION: Exposure to vapors above established exposure limit results in respiratory irritation which may lead to difficulty in breathing and tightness in the chest.
SECTION 4: FIRST AID MEASURES

EYES: Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect, which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid cause abrasive damage.

SKIN: Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.

INGESTION: Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing by separating mass.

INHALATION: Remove to fresh air. If discomfort persists seek medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

NFPA HAZARD CLASSIFICATION
HEALTH: FLAMMABILITY: REACTIVITY: <2,2,1>
EXTINGUISHING MEDIA: Foam, CO2, Dry chemical (B-C)
FLASHPOINT: 65C-93.4C (150F-200F)
UNUSUAL FIRE AND EXPLOSION HAZARDS: None

SPECIAL FIREFIGHTING PROCEDURES: Firefighters should wear positive pressure self-contained breathing apparatus (SCBA).
HAZARDOUS DECOMPOSITION PRODUCTS: Trace amount of toxic or irritating fumes may be released and the use of breathing apparatus is recommended.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Ventilate area. Prevent product from entering the drains. Do not use cloth for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured materials can be disposed of as non-hazardous wastes.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors and cause thermal burns.

See label on product for use directions.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use positive downdraft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

RESPIRATORY PROTECTION: Use NIOSH approved respirator if there is potential to exceed exposure limits.

EYE PROTECTION: Chemical splash goggles or safety glasses with side shields.

SKIN PROTECTION: Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nylon or cotton.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless gel.

ODOR: Sharp, irritating.

PHYSICAL STATE: Gel

pH AS SUPPLIED: Not applicable.

SPECIFIC GRAVITY (H2O = 1): 1.1

SOLUBILITY IN WATER: Polymerizes in presence of water.

EVAPORATION RATE: Not available

BOILING POINT: > 149°C (300°F)

VAPOR PRESSURE: <0.2 mm Hg

% VOC 20g/L (California SCAQMD Method 316B (estimated))

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Spontaneous polymerization.

HAZARDOUS POLYMERIZATION: Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.

INCOMPATIBILITY: Water, amines, alkalis and alcohols.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: Acute oral LD50 >5000 mg/kg, rat (estimated). LD50 >2000 mg/kg, rabbit (estimated).

See also Section 3 Hazard Identifications.

SECTION 11 NOTES: Contact Regulatory Affairs if further information is required.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data available.
SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose in accordance with federal, state or local regulations.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
PROPER SHIPPING NAME: Combustible liquids N.O.S (Cyanoacrylate ester)
HAZARD CLASS: 3
UN NUMBER: NA 1993
PACKING GROUP: III
EXCEPTIONS: (Not more than 450L) Unrestricted
MARINE POLLUTANT: None

INTERNATIONAL AIR TRANSPORTATION (ICAO/IATA)
PROPER SHIPPING NAME: Aviation regulated liquids N.O.S (Cyanoacrylate ester)
HAZARD CLASS: 9
UN NUMBER: UN3334
PACKING GROUP: III
EXCEPTIONS: (Not more than 500ml). Unrestricted.

WATER TRANSPORATION (IMO/IMDG)
PROPER SHIPPING NAME: Unrestricted.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
This product has been labeled according to the Federal Hazardous Substances Act and the associated Consumer Product Safety Regulations.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: Information provided in this MSDS is intended to provide supplementary information for consumer uses of this product. This product is not intended for industrial uses.

Contact Regulatory Affairs for additional information

DISCLAIMER: The information appearing herein is furnished without express or implied warranty and is based upon tests and data believed to be accurate to the best knowledge of Henkel Consumer
Adhesives Inc. It is the user's responsibility to ensure that the product is handled safely and that the instructions for use are properly communicated and followed. Henkel Corporation assumes no legal responsibility or liability for any use not in accordance with the use described in this MSDS or in the product labeling.
LOCTITE SUPER GLUE CONTROL LIQUID
IDH: 234995

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: LOCTITE SUPER GLUE CONTROL LIQUID
Item Description: RED WING
Product Type: Cyanoacrylate ester

2. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>7085-85-0</td>
<td>60-100</td>
</tr>
<tr>
<td>Glyceryl ester</td>
<td>Proprietary</td>
<td>10-30</td>
</tr>
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</table>

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Exposure Limits (TWA)</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>0.2 ppm TWA</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview: Bonds skin in seconds. May cause eye, skin, and respiratory irritation. Combustible liquid and vapor.

Inhalation: Exposure to vapors above the established exposure limit results in respiratory irritation which may lead to difficulty in breathing and tightness in the chest.

Skin contact: Bonds to skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic response is rare. Cyanoacrylates generate heat on solidification. In rare circumstances a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin.

Eye contact: Irritating to eyes. Causes excessive tearing. Eyelids may bond.

Ingestion: Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

Estimated acute oral LD50 more than 5000mg/kg (rat).
Estimated acute dermal LD 50 more than 2000 mg/kg (rabbit).

Primary Routes of Entry: Skin, inhalation, eyes
Existing Conditions
Aggravated by Exposure: Eye, skin, and respiratory disorders.
3. HAZARDS IDENTIFICATION (continued)

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Target Organ and Other Health Effects</th>
<th>Carcinogen</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>ALG IRR RES</td>
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<td>NO</td>
</tr>
<tr>
<td>Glyceryl ester</td>
<td>IRR</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
</tbody>
</table>

Abbreviations

N/A Not Applicable        AC3 ACGIH animal carcinogen.
ALG Allergen              BLO Blood
BNM Bone Marrow           CNS Central nervous system
EYE Eyes                  IMM Immune system
IRR Irritant              LIV Liver
MUT Mutagen               RES Respiratory
SKI Skin                  THY Thyroid

4. FIRST AID MEASURES

Ingestion: Ingestion is not likely. See supplemental page for emergency procedures.
Inhalation: Remove to fresh air. If symptoms persist, obtain medical attention.
Skin Contact: Soak in warm water. See supplemental page for emergency procedures.
Eye Contact: Immediately flush with plenty of water for at least 15 minutes. See supplemental page for emergency procedures.

5. FIRE FIGHTING MEASURES

Flash Point: 176 - 200°F
Autoignition temperature: 485°C (905°F)
Extinguishing media: Carbon dioxide, foam, dry powder
Special Firefighting Procedures: Wear positive pressure self-contained breathing apparatus (SCBA).
Hazardous combustion products formed: Trace amounts of toxic and/or irritating fumes may be released and the use of breathing apparatus is recommended.
Unusual Fire or Explosion Hazards: None
Explosive Limits:
(%) by volume in air)Lower Not available
(%) by volume in air)Upper Not available
6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Do not use cloths for mopping. Flood with water to polymerize and scrape off the floor. Cured material can be disposed of as non-hazardous waste.

Environmental precautions: Ventilate area. Prevent product from entering the drains.

7. HANDLING AND STORAGE

Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. No special restrictions on storage with other products.

Handling: Avoid contact with skin, eyes and clothing. Avoid breathing vapor. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors, and cause thermal burns.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses with side shields or goggles.
Skin: Nitrile or polyethylene gloves and aprons. Do not use PVC, nylon or cotton. See supplemental page for additional information.
Ventilation: Positive down-draft exhaust ventilation should be provided to maintain vapor concentration below TLV.
Respiratory: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear liquid
Odor: Sharp, irritating
Boiling Point: More than 300°F (149°C)
PH: Does not apply
Solubility in Water: Polymerizes in presence of water
Specific Gravity: 1.1 @ 20°C
VOC Content: Less than 2%; 20 g/L (California SCAQMD Method 316B, estimated)
Vapor Pressure: Less than 0.2 mm Hg
9. PHYSICAL AND CHEMICAL PROPERTIES (continued)

Vapor Density: Approximately 3
Evaporation Rate (Ether = 1) Not available
Partition coefficient (n-octanol/water): Not applicable
Odor Threshold: 1 – 2 ppm

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.
Hazardous Polymerization: Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.
Incompatibility: Water, alcohols, amines, alkalis.
Conditions to Avoid: Spontaneous polymerization
Hazardous Decomposition Products: None

11. TOXICOLOGICAL INFORMATION

See Section 3.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Dispose of in accordance with Federal, State and local regulations.
EPA Hazardous Waste Number: Not a RCRA Hazardous Waste

14. TRANSPORTATION INFORMATION

DOT (49 CFR 172) - Domestic Ground Transport:
Proper Shipping Name: Combustible liquids, n.o.s. (Cyanoacrylate ester)
Hazard Class or Division: 3
Identification Number: NA 1993
Packing group: None
Exceptions: Unrestricted (Not more than 450 L)
Marine Pollutant: None
LOCTITE SUPER GLUE CONTROL LIQUID  
IDH: 234995

International Air Transportation (ICAO/IATA):
Proper Shipping Name:  Aviation regulated liquid, n.o.s., (Cyanoacrylate Ester)
Class or Division:  9
UN or ID Number:  UN 3334
Packing group:  None
Exceptions:  (Not more than 500mL) Unrestricted

Water Transportation (IMO/IMDG):
Proper Shipping Name:  Unrestricted
Class or Division:  None
UN or ID Number:  None
Packing group:  None
Marine pollutant:  None

15. REGULATORY INFORMATION

United States
TSCA 8(b) Inventory Status:  All components are listed or exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification:  None.
CERCLA/SARA 302:  None.
CERCLA/SARA 311/312:  Immediate Health Hazard, Delayed Health Hazard, Fire, Reactive
CERCLA/SARA 313:  None.
CA Proposition 65:  No Prop 65 listed chemicals are known to be present.

Canada
CEPA DSL/NDSL Status:  One or more components are not listed on, and are not exempt from listing on either the the Domestic Substances List or the Non-Domestic Substances List.
WHMIS hazard class:  B.3, D.2.B
16. OTHER INFORMATION

Estimated NFPA(R) Code:
   Health Hazard: 2
   Fire Hazard: 2
   Reactivity Hazard: 1
   Specific Hazard: Does not apply

Estimated HMIS(R) Code:
   Health Hazard: 2
   Flammability Hazard: 2
   Reactivity Hazards: 1
   Personal Protection: See Section 8.

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HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared by:
Company: Regulatory Affairs
           Henkel Corporation, Avon, Ohio
(24hr.) Phone: (440) 937-7000

Created on: 04/27/2007
Revised on: 10/12/2009
INFORMATION FOR FIRST AID AND CASUALTY ON TREATMENT FOR ADHESION OF HUMAN SKIN TO ITSELF IF CAUSED BY CYANOACRYLATE ADHESIVES

Cyanoacrylate adhesive is a very fast setting and strong adhesive. It bonds human tissue including skin in seconds. Experience has shown that accidents due to cyanoacrylates are handled best by passive, nonsurgical first aid. Treatment of specific types of accidents are given below.

SKIN CONTACT
Remove excess adhesive. Soak in warm, soapy water. The adhesive will come loose from the skin in several hours. Cured adhesive does not present a health hazard even when bonded to the skin.

Avoid contact with clothes, fabrics, rags, or tissue. Contact with these materials may cause polymerization. The polymerization of large amounts of adhesive will generate heat causing smoke, skin burns, and strong, irritating vapors. Wear nitrile or polyethylene gloves and apron when handling large amounts of adhesive.

SKIN ADHESION
First immerse the bonded surfaces in warm, soapy water. Peel or roll the surfaces apart with the aid of a blunt edge, e.g. a spatula or a teaspoon handle; then remove adhesive from the skin with soap and water. Do not try to pull surfaces apart with a direct opposing action.

EYELID TO EYELID OR EYEBALL ADHESION
In the event that eyelids are stuck together or bonded to the eyeball, wash thoroughly with warm water and apply a gauze patch. The eye will open without further action, typically in 1-4 days. There will be no residual damage. Do not try to open the eyes by manipulation.

ADHESIVE ON THE EYEBALL
Cyanoacrylate introduced into the eyes will attach itself to the eye protein and will disassociate from it over intermittent periods, generally covering several hours. This will cause periods of weeping until clearance is achieved. During the period of contamination, double vision may be experienced together with a lachrymatory effect, and it is important to understand the cause and realize that disassociation will normally occur within a matter of hours, even with gross contamination.

MOUTH
If lips are accidentally stuck together, apply lots of warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth. Peel or roll lips apart. Do not try to pull the lips with direct opposing action.
It is almost impossible to swallow cyanoacrylate. The adhesive solidifies and adheres in the mouth. Saliva will lift the adhesive in one half to two days. In case a lump forms in the mouth, position the patient to prevent ingestion of the lump when it detaches.

BURNS
Cyanoacrylates give off heat on solidification. In rare cases a large drop will increase in temperature enough to cause a burn. Burns should be treated normally after the lump of cyanoacrylate is released from the tissue as described above.

SURGERY
It should never be necessary to use such a drastic method to separate accidentally bonded skin.
LOCTITE Brush On Super Glue  
IDH:  852882  

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION  

Product Name:  LOCTITE Brush On Super Glue  
IDH:                       852882  
Product Type:              Cyanoacrylate ester  

2. COMPOSITION, INFORMATION ON INGREDIENTS  

Ingredients                                CAS No.               %  
Ethyl cyanoacrylate                       7085-85-0           60-100  

Ingredients which have exposure limits  

<table>
<thead>
<tr>
<th>Exposure Limits (TWA)</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingredients</td>
<td>(TLV)</td>
<td>(PEL)</td>
<td></td>
</tr>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>0.2 ppm TWA</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION  

Toxicity:                  
Skin contact may cause burns.
Bonds skin rapidly and strongly.
Skin and eye irritant.
Estimated oral LD50 more than 5000mg/kg.
Estimated dermal LD 50 more than 2000 mg/kg.

Primary Routes of Entry:   
None known

Signs and Symptoms of Exposure:  
Vapor is irritating to eyes and mucous membranes above TLV. Prolonged and repeated overexposure to vapors may produce symptoms of non-allergic asthma in sensitive individuals.

Existing Conditions Aggravated by Exposure:   
None known

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Target Organ and Other Health Effects</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>ALG IRR RES</td>
<td>NO  NO  NO</td>
</tr>
</tbody>
</table>

Abbreviations

N/A Not Applicable
ALG Allergen   IRR Irritant
MUT Mutagen    RES Respiratory
4. FIRST AID MEASURES

Ingestion: Ingestion is not likely. See supplemental page for emergency procedures.
Inhalation: Remove to fresh air. If symptoms persist, obtain medical attention.
Skin Contact: Soak in warm water. See supplemental page for emergency procedures.
Eye Contact: Flush with water. See supplemental page for emergency procedures.

5. FIRE FIGHTING MEASURES

Flash Point: 176 – 93.4°F Method: Tag Closed Cup
Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical
Special Firefighting Procedures: Firefighters should wear positive pressure SCBA
Hazardous Products formed by Fire or Thermal Decomp: Irritating organic vapors
Unusual Fire or Explosion Hazards: None

Explosive Limits:
(% by volume in air)Lower Not available
(% by volume in air)Upper Not available

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Flood with water to polymerize. Soak up with an inert absorbent.

7. HANDLING AND STORAGE

Safe Storage: Store at or below 75°F
handling:
(Contact Loctite Customer Service 1-800-243-4874 for shelf life information)

Avoid contact with skin and eyes. Avoid breathing vapor.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Nitrile or polyethylene gloves and aprons.
Do not use cotton.
See supplemental page for additional information.
Ventilation: Positive down-draft exhaust ventilation should be provided to maintain vapor concentration below TLV
Respiratory Not available
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear colourless to straw liquid
Odor: Sharp, irritating
Boiling Point: More than 300øF
pH: Does not apply
Solubility in Water: Polymerized by water
Specific Gravity 1.05
Volatile Organic Compound (EPA Method 24) Less than 20 g/L (California SCAQMD Method 316)est.
Vapor Pressure: Less than 0.2 mm
Vapor Density: Approximately 3
Evaporation Rate (Ether = 1) Not available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: Polymerized by contact with water, alcohols, amines, alkalies.
Conditions to Avoid: Not available
Hazardous Decomposition Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

See Section 3.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Polymerize as above. Incinerate following EPA and local regulations.
EPA Hazardous Waste Number NH - Not a RCRA Hazardous Waste Material
14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)
Domestic Ground Transport
Proper Shipping Name: Unrestricted (Not more than 450 liters); Combustible liquids, n.o.s. (Cyanoacrylate ester) (More than 450 liters)
Hazard Class or Division: Unrestricted (Not more than 450 liters)
Identification Number: None (Not more than 450 liters); NA 1993 (More than 450 liters)
Marine Pollutant: None

IATA
Proper Shipping Name: Unrestricted (Not more than one pint); Aviation regulated liquid, n.o.s., (Cyanoacrylate Ester) (More than one pint)
Class or Division: Unrestricted (Not more than one pint); Class 9 (More than one pint)
UN or ID Number: None (Not more than one pint); UN 3334 (More than one pint)

15. REGULATORY INFORMATION

CA Proposition 65: No California Proposition 65 chemicals are known to be present.

16. OTHER INFORMATION

Estimated NFPA(R) Code:
Health Hazard: 2
Fire Hazard: 2
Reactivity Hazard: 1
Specific Hazard: Does not apply

Estimated HMIS(R) Code:
Health Hazard: 2
Flammability Hazard: 2

16. OTHER INFORMATION (continued)

Reactivity Hazards: 1
Personal Protection: See Section 8.

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared by:
Company: Regulatory Affairs 440) 937-7000
INFORMATION FOR FIRST AID AND CASUALTY ON TREATMENT FOR ADHESION OF HUMAN SKIN TO ITSELF IF CAUSED BY CYANOACRYLATE ADHESIVES

Cyanoacrylate adhesive is a very fast setting and strong adhesive. It bonds human tissue including skin in seconds. Experience has shown that accidents due to cyanoacrylates are handled best by passive, nonsurgical first aid. Treatment of specific types of accidents are given below.

SKIN CONTACT
Remove excess adhesive. Soak in warm, soapy water. The adhesive will come loose from the skin in several hours. Cured adhesive does not present a health hazard even when bonded to the skin.

Avoid contact with clothes, fabrics, rags, or tissue. Contact with these materials may cause polymerization. The polymerization of large amounts of adhesive will generate heat causing smoke, skin burns, and strong, irritating vapors. Wear nitrile or polyethylene gloves and apron when handling large amounts of adhesive.

SKIN ADHESION
First immerse the bonded surfaces in warm, soapy water. Peel or roll the surfaces apart with the aid of a blunt edge, e.g. a spatula or a teaspoon handle; then remove adhesive from the skin with soap and water. Do not try to pull surfaces apart with a direct opposing action.

EYELID TO EYELID OR EYEBALL ADHESION
In the event that eyelids are stuck together or bonded to the eyeball, wash thoroughly with warm water and apply a gauze patch. The eye will open without further action, typically in 1-4 days. There will be no residual damage. Do not try to open the eyes by manipulation.

ADHESIVE ON THE EYEBALL
Cyanoacrylate introduced into the eyes will attach itself to the eye protein and will disassociate from it over intermittent periods, generally covering several hours. This will cause periods of weeping until clearance is achieved. During the period of contamination, double vision may be experienced together with a lachrymatory effect, and it is important to understand the cause and realize that disassociation will normally occur within a matter of hours, even with gross contamination.
MOUTH
If lips are accidentally stuck together, apply lots of warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth. Peel or roll lips apart. Do not try to pull the lips with direct opposing action.

It is almost impossible to swallow cyanoacrylate. The adhesive solidifies and adheres in the mouth. Saliva will lift the adhesive in one half to two days. In case a lump forms in the mouth, position the patient to prevent ingestion of the lump when it detaches.

BURNS
Cyanoacrylates give off heat on solidification. In rare cases a large drop will increase in temperature enough to cause a burn. Burns should be treated normally after the lump of cyanoacrylate is released from the tissue as described above.

SURGERY
It should never be necessary to use such a drastic method to separate accidentally bonded skin.
LOCTITE GLUE PEN

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: LOCTITE GLUE PEN
IDH: 235494
Product Type: Cyanoacrylate ester

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients                  CAS No.  %
Ethyl cyanoacrylate           7085-85-0   95-100
Poly (methyl methacrylate)    9011-14-7    3-5
HYDROQUINONE                  123-31-9     0.1-0.5

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Exposure Limits (TWA)</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>OTHER</th>
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<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>0.2 ppm TWA</td>
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<td>None</td>
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<tr>
<td>HYDROQUINONE</td>
<td>2 mg/m³ TWA</td>
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Exposure Limits (STEL)

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</thead>
<tbody>
<tr>
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<td>4 mg/m³ STEL</td>
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</table>

3. HAZARDS IDENTIFICATION

Toxicity: Skin contact may cause burns. Bonds skin rapidly and strongly. Skin and eye irritant. Estimated oral LD₅₀ more than 5000 mg/kg. Estimated dermal LD₅₀ more than 2000 mg/kg.

Primary Routes of Entry: None known

Signs and Symptoms of Exposure: Vapor is irritating to eyes and mucous membranes above TLV. Prolonged and repeated overexposure to vapors may produce symptoms of non-allergic asthma in sensitive individuals.

Existing Conditions Aggravated by Exposure: None known

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Literature Referenced</th>
<th>Carcinogen</th>
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<td>NTP IARC OSHA</td>
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<td>Ethyl cyanoacrylate</td>
<td>ALG IRR RES</td>
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<td>Poly (methyl methacrylate)</td>
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3. HAZARDS IDENTIFICATION (continued)

HYDROQUINONE

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<th>Abbr.</th>
<th>Description</th>
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<tbody>
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<td>AC3</td>
<td>ACGIH animal carcinogen.</td>
</tr>
<tr>
<td>BLO</td>
<td>Blood</td>
</tr>
<tr>
<td>BNM</td>
<td>Bone Marrow</td>
</tr>
<tr>
<td>CNS</td>
<td>Central nervous system</td>
</tr>
<tr>
<td>EYE</td>
<td>Eyes</td>
</tr>
<tr>
<td>IMM</td>
<td>Immune system</td>
</tr>
<tr>
<td>IRR</td>
<td>Irritant</td>
</tr>
<tr>
<td>LIV</td>
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<tr>
<td>MUT</td>
<td>Mutagen</td>
</tr>
<tr>
<td>SKI</td>
<td>Skin</td>
</tr>
<tr>
<td>THY</td>
<td>Thyroid</td>
</tr>
</tbody>
</table>

Abbreviations

N/A Not Applicable
AC3 ACGIH animal carcinogen.
ALG Allergen
BLO Blood
BNM Bone Marrow
CNS Central nervous system
EYE Eyes
IMM Immune system
IRR Irritant
LIV Liver
MUT Mutagen
RES Respiratory
SKI Skin
THY Thyroid

4. FIRST AID MEASURES

Ingestion: Ingestion is not likely. See supplemental page for emergency procedures.

Inhalation: Remove to fresh air. If symptoms persist, obtain medical attention.

Skin Contact: Soak in warm water. See supplemental page for emergency procedures.

Eye Contact: Flush with water. See supplemental page for emergency procedures.

5. FIRE FIGHTING MEASURES

Flash Point: 150 - 200øF Method: Tag Closed Cup

Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical

Special Firefighting Procedures: Not available

Hazardous Products formed by Fire or Thermal Decomposition: Irritating organic vapors

Unusual Fire or Explosion Hazards: None

Explosive Limits:
- (% by volume in air)Lower Not available
- (% by volume in air)Upper Not available

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Flood with water to polymerize. Soak up with an inert absorbent.
7. HANDLING AND STORAGE

Safe Storage: Store at or below 75øF
(Contact Loctite Customer Service 1-800-243-4874 for shelf life information)
Handling: Avoid contact with skin and eyes. Avoid breathing vapor.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Nitrile or polyethylene gloves and aprons.
Do not use cotton. See supplemental page for additional information.
Ventilation: Positive down-draft exhaust ventilation should be provided to maintain vapor concentration below TLV
Respiratory Not available
See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear liquid
Odor: Sharp, irritating
Boiling Point: More than 300øF
pH: Does not apply
Solubility in Water: Polymerized by water
Specific Gravity 1.05
Volatile Organic Compound (EPA Method 24) Not available
Vapor Pressure: Less than 0.2 mm
Vapor Density: Approximately 3
Evaporation Rate (Ether = 1) Not available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: Polymerized by contact with water, alcohols, amines, alkalies.
Conditions to Avoid: Not available
Hazardous Decomposition Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

See Section 3.
Product Name: LOCTITE GLUE PEN

12. ECOLOGICAL INFORMATION
No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Polymerize as above. Incinerate following EPA and local regulations.

EPA Hazardous Waste Number NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)

Domestic Ground Transport

Proper Shipping Name: Unrestricted (Not more than 450 liters); Combustible liquids, n.o.s. (Cyanoacrylate ester) (More than 450 liters)

Hazard Class or Division: Unrestricted (Not more than 450 liters)
Combustible liquid (More than 450 liters)

Identification Number: None (Not more than 450 liters);
NA 1993 (More than 450 liters)

Marine Pollutant: None

IATA

Proper Shipping Name: Unrestricted (Not more than one pint); Aviation regulated liquid, n.o.s., (Cyanoacrylate Ester) (More than one pint)

Class or Division: Unrestricted (Not more than one pint);
Class 9 (More than one pint)

UN or ID Number: None (Not more than one pint)
UN 3334 (More than one pint)

15. REGULATORY INFORMATION

CA Proposition 65: Not available

16. OTHER INFORMATION

Estimated NFPA(R) Code:
Health Hazard: 2
Fire Hazard: 2
Reactivity Hazard: 1
Specific Hazard: Does not apply

Estimated HMIS(R) Code:
Health Hazard: 2
Flammability Hazard: 2
Reactivity Hazards: 1
16. OTHER INFORMATION (continued)

Personal Protection: See Section 8.

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared by:
Company: Safety, Health and Regulatory Affairs - North America,
Loctite Corp., 1001 Tr Br Cr, Rocky Hill CT 06067
(24hr.) Phone: (860) 571-5100
INFORMATION FOR FIRST AID AND CASUALTY ON TREATMENT FOR ADHESION OF HUMAN SKIN TO ITSELF IF CAUSED BY CYANOACRYLATE ADHESIVES

Cyanoacrylate adhesive is a very fast setting and strong adhesive. It bonds human tissue including skin in seconds. Experience has shown that accidents due to cyanoacrylates are handled best by passive, nonsurgical first aid. Treatment of specific types of accidents are given below.

SKIN CONTACT
Remove excess adhesive. Soak in warm, soapy water. The adhesive will come loose from the skin in several hours. Cured adhesive does not present a health hazard even when bonded to the skin.

Avoid contact with clothes, fabrics, rags, or tissue. Contact with these materials may cause polymerization. The polymerization of large amounts of adhesive will generate heat causing smoke, skin burns, and strong, irritating vapors. Wear nitrile or polyethylene gloves and apron when handling large amounts of adhesive.

SKIN ADHESION
First immerse the bonded surfaces in warm, soapy water. Peel or roll the surfaces apart with the aid of a blunt edge, e.g. a spatula or a teaspoon handle; then remove adhesive from the skin with soap and water. Do not try to pull surfaces apart with a direct opposing action.

EYELID TO EYELID OR EYEBALL ADHESION
In the event that eyelids are stuck together or bonded to the eyeball, wash thoroughly with warm water and apply a gauze patch. The eye will open without further action, typically in 1-4 days. There will be no residual damage. Do not try to open the eyes by manipulation.

ADHESIVE ON THE EYEBALL
Cyanoacrylate introduced into the eyes will attach itself to the eye protein and will disassociate from it over intermittent periods, generally covering several hours. This will cause periods of weeping until clearance is achieved. During the period of contamination, double vision may be experienced together with a lachrymatory effect, and it is important to understand the cause and realize that disassociation will normally occur within a matter of hours, even with gross contamination.

MOUTH
If lips are accidentally stuck together, apply lots of warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth. Peel or roll lips apart. Do not try to pull the lips
Supplement

with direct opposing action.

It is almost impossible to swallow cyanoacrylate. The adhesive solidifies and adheres in the mouth. Saliva will lift the adhesive in one half to two days. In case a lump forms in the mouth, position the patient to prevent ingestion of the lump when it detaches.

BURNS
Cyanoacrylates give off heat on solidification. In rare cases a large drop will increase in temperature enough to cause a burn. Burns should be treated normally after the lump of cyanoacrylate is released from the tissue as described above.

SURGERY
It should never be necessary to use such a drastic method to separate accidentally bonded skin.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Super Glue Liquid
Product type: Cyanoacrylate
Item number: 1399967
Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 800.624.7767
Emergency telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
HMIS:
Physical state: Liquid
Color: Colorless, Transparent
Odor: Sharp, Irritating

HEALTH: 2
FLAMMABILITY: 2
PHYSICAL HAZARD: 1

Personal Protection: See MSDS Section 8

WARNING:
COMBUSTIBLE LIQUID AND VAPOR.
BONDS SKIN IN SECONDS.
MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects
Inhalation: Exposure to vapors above the established exposure limit results in respiratory irritation, which may lead to difficulty in breathing and tightness in the chest.
Skin contact: Bonds skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic response is rare. Cyanoacrylates generate heat on solidification. In rare circumstances a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin.
Eye contact: Irritating to eyes. Causes excessive tearing. Eyelids may bond.
Ingestion: Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous component</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl 2-cyanoacrylate</td>
<td>7085-85-0</td>
<td>60 - 100</td>
</tr>
<tr>
<td>Thicker</td>
<td>Proprietary</td>
<td>5 - 10</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact: Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid caused abrasive damage.

Ingestion: Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing any separated mass.

Notes to physician: Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed.

5. FIRE FIGHTING MEASURES

Flash point: 80 - 93.4 °C (176°F - 200.12 °F) Tagliabue closed cup
Autoignition temperature: 485 °C (905°F)
Flammable/Explosive limits - lower: Not determined
Flammable/Explosive limits - upper: Not determined
Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).
Unusual fire or explosion hazards: Not available
Hazardous combustion products: Trace amounts of toxic and/or irritating fumes may be released and the use of breathing apparatus is recommended.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Ventilate area. Do not allow product to enter sewer or waterways.
Clean-up methods: Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste.

7. HANDLING AND STORAGE

Handling: Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors, and cause thermal burns.
Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl 2-cyanoacrylate</td>
<td>0.2 ppm TWA</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Thickener</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nylon or cotton.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Colorless, Transparent</td>
</tr>
<tr>
<td>Odor:</td>
<td>Sharp, Irritating</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>1 - 2 ppm</td>
</tr>
<tr>
<td>pH:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>&lt; 0.2 mm hg</td>
</tr>
<tr>
<td>Boiling point/range:</td>
<td>&gt; 149 °C (&gt; 300.2 °F)</td>
</tr>
<tr>
<td>Melting point/range:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>1.05</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>3 Approximately</td>
</tr>
<tr>
<td>Flash point:</td>
<td>80 - 93.4 °C (176°F - 200.12 °F) Tagliabue closed cup</td>
</tr>
<tr>
<td>Flammable/Explosive limits - lower:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammable/Explosive limits - upper:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Autoignition temperature:</td>
<td>485 °C (905°F)</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>Polymerises in presence of water.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>VOC content:</td>
<td>&lt; 2 %; &lt; 20 g/l (California SCAQMD Method 316B) (Estimated)</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Hazardous reactions: Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.

Hazardous decomposition products: Not available

Incompatible materials: Water, amines, alkalis and alcohols.

Conditions to avoid: Spontaneous polymerization.

11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity: LD50 (rat) > 5,000 mg/kg (Estimated)

Acute dermal product toxicity: LD50 (rabbit) > 2,000 mg/kg (Estimated)

IDH number: 1399967

Product name: Loctite Super Glue Liquid
### Hazardous components

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl 2-cyanoacrylate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Thickener</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Health Effects/Target Organs

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl 2-cyanoacrylate</td>
<td>Irritant, Allergen, Respiratory</td>
</tr>
<tr>
<td>Thickener</td>
<td>Irritant</td>
</tr>
</tbody>
</table>

### 12. ECOLOGICAL INFORMATION

Ecological information: Not known.

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

### 14. TRANSPORT INFORMATION

**U.S. Department of Transportation Ground (49 CFR)**

- Proper shipping name: Combustible liquid, n.o.s. (Cyanoacrylate ester)
- Hazard class or division: Combustible Liquid
- Identification number: NA 1993
- Packing group: III
- Exceptions: (Not more than 450 Liters), Unrestricted

**International Air Transportation (ICAO/IATA)**

- Proper shipping name: Aviation regulated liquid, n.o.s. (Cyanoacrylate ester)
- Hazard class or division: 9
- Identification number: UN 3334
- Packing group: None
- Exceptions: Primary packs containing less than 500ml are unregulated by this mode of transport and may be shipped unrestricted.

**Water Transportation (IMO/IMDG)**

- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

### 15. REGULATORY INFORMATION

**United States Regulatory Information**

- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12(b) Export Notification: None above reporting de minimus
- CERCLA/SARA Section 302 EHS: None above reporting de minimus
- CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire, Reactive
- CERCLA/SARA 313: None above reporting de minimus
- California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

IDH number: 1399967

Product name: Loctite Super Glue Liquid
Canada Regulatory Information

CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

WHMIS hazard class: B.3, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
CONSUMER MATERIAL SAFETY DATA SHEET
NAME OF PRODUCT: Loctite Super Control Extra Time
MSDS DATE: 05/14/07 rev 05/12/08, 3/17/10

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Loctite Super Control Extra Time
SUPPLIER: Henkel Consumer Adhesives.
ADDRESS: 32150 Just Imagine Drive
          Avon, Ohio 44011
EMERGENCY PHONE: (440) 937-7000
CHEMICAL FAMILY: Cyanoacrylates
PRODUCT USE: Consumer Product; Super Glue
PREPARED BY: Regulatory Affairs
MSDS PREPARATION DATE: 05/14/2007 rev05/12/08, 3/17/10

SECTION 1 NOTES: Household Super Glue

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>%</th>
<th>CAS NO.</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>60-100</td>
<td>7085-85-0</td>
<td>None</td>
<td>0.2ppm TWA</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: BONDS SKIN IN SECONDS
                    MAY CAUSE EYE AND RESPIRATORY IRRITATION
                    COMBUSTIBLE LIQUID AND VAPOR

ROUTES OF ENTRY: oral, dermal, inhalation

EYES: Irritating to the eyes. Causes excessive tearing. Eyelids may bond.

SKIN: Bonds skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic reaction is rare. Cyanoacrylates generate heat on solidification. In rare circumstances, a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin.

INGESTION: Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

INHALATION: Exposure to vapors above established exposure limit results in respiratory irritation which may lead to difficulty in breathing and tightness in the chest.
SECTION 4: FIRST AID MEASURES

EYES: Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect, which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid cause abrasive damage.

SKIN: Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.

INGESTION: Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing by separating mass.

INHALATION: Remove to fresh air. If discomfort persists seek medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

NFPA HAZARD CLASSIFICATION
HEALTH: FLAMMABILITY: REACTIVITY: <2,2,1>
EXTINGUISHING MEDIA: Foam, CO2, Dry chemical (B-C)
FLAMMABLE LIMITS IN AIR: Not determined
FLASHPOINT: 80°C-93.4°C (176°F-200°F)
UNUSUAL FIRE AND EXPLOSION HAZARDS: None
SPECIAL FIREFIGHTING PROCEDURES: Firefighters should wear positive pressure self-contained breathing apparatus (SCBA).
HAZARDOUS DECOMPOSITION PRODUCTS: Trace amount of toxic or irritating fumes may be released and the use of breathing apparatus is recommended.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Ventilate area. Prevent product from entering the drains. Do not use cloth for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured materials can be disposed of as non-hazardous wastes.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors and cause thermal burns.

See label on product for use directions.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use positive downdraft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

RESPIRATORY PROTECTION: Use NIOSH approved respirator if there is potential to exceed exposure limits.

EYE PROTECTION: Chemical splash goggles or safety glasses with side shields.

SKIN PROTECTION: Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nylon or cotton.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear Colorless Straw
ODOR: Sharp, irritating.
PHYSICAL STATE: Liquid
pH AS SUPPLIED: Not applicable.
SPECIFIC GRAVITY (H2O = 1): 1.075
SOLUBILITY IN WATER: Polymerizes in presence of water.
EVAPORATION RATE: Not available
BOILING POINT: > 149°C (300°F)
VAPOR PRESSURE: <0.2 mm Hg
% VOC <20g/L (California SCAQMD Method 316B (estimated))

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under recommended storage conditions.
CONDITIONS TO AVOID: Spontaneous polymerization.
HAZARDOUS POLYMERIZATION: Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.
INCOMPATIBILITY: Water, amines, alkalis and alcohols.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: Acute oral LD50 >5000mg/kg, rat (estimated). LD50 >2000mg/kg, rabbit (estimated).

CARCINOGEN STATUS:
Hazardous Components NTP Carcinogen IARC Carcinogen OSHA Carcinogen
Ethyl cyanoacrate NO NO NO
7085-85-0

Health Effects/Target Organs - Allergen, Irritant, Respiratory

See also Section 3 Hazard Identifications.

SECTION 11 NOTES: Contact Regulatory Affairs if further information is required.
SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended methods of disposal: Dispose of in accordance with Federal, State and local regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

WASTE DISPOSAL METHOD: Dispose in accordance with federal, state or local regulations.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: Combustible liquids N.O.S (Cyanoacrylate ester)
HAZARD CLASS: 3
UN NUMBER: NA 1993
PACKING GROUP: III
EXCEPTIONS: (Not more than 450L) Unrestricted
MARINE POLLUTANT: None

NOTE: This product classifies as a Consumer Commodity ORM-D due to its size and intended use.

INTERNATIONAL AIR TRANSPORTATION (ICAO/IATA)

PROPER SHIPPING NAME: Aviation regulated liquids N.O.S (Cyanoacrylate ester)
HAZARD CLASS: 9
UN NUMBER: UN3334
PACKING GROUP: III
EXCEPTIONS: (Not more than 500ml). Unrestricted.

WATER TRANSPORTATION (IMO/IMDG)

PROPER SHIPPING NAME: Unrestricted.

HAZARD CLASS: None
UN NUMBER: None
PACKING GROUP: None
EXCEPTIONS:

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

This product has been labeled according to the Federal Hazardous Substances Act and the associated Consumer Product Safety Regulations.
TSCA 8 (b) Inventory Status: All components are listed or are exempt from the listing on the Toxic Substances Control Act Inventory.
CERCLA/SARA Section 302EHS: None
Section 311/312: Immediate health Hazard, Delayed Health Hazard, Fire, Reactive
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.
CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic list. Those components must be tracked by all Canadian Importers of Record as required by the Canadian Environmental Protection Agency. They may be imported into Canada in limited quantities. Please contact Product Safety and Regulatory Affairs for details. All other components are listed on or are exempt from listing B.3, D.2,B

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: Information provided in this MSDS is intended to provide supplementary information for consumer uses of this product. This product is not intended for industrial uses.

PREPARATION INFORMATION: Prepared by Regulatory Affairs

DISCLAIMER: The information appearing herein is furnished without express or implied warranty and is based upon tests and data believed to be accurate to the best knowledge of Henkel Consumer Adhesives Inc. It is the user’s responsibility to ensure that the product is handled safely and that the instructions for use are properly communicated and followed. Henkel Consumer Adhesives Inc. assumes no legal responsibility or liability for any use not in accordance with the use described in this MSDS or in the product labeling.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: INST GLASS GLUE 2GR TB/CG
Product Type: Cyanoacrylate

2. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Butyl cyanoacrylate</td>
<td>6606-65-1</td>
<td>65-70</td>
</tr>
<tr>
<td>Trimellitic ester</td>
<td>90218-77-2</td>
<td>30-35</td>
</tr>
<tr>
<td>Poly (methyl methacrylate)</td>
<td>9011-14-7</td>
<td>3-5</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>123-31-9</td>
<td>0.1-0.5</td>
</tr>
</tbody>
</table>

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Butyl cyanoacrylate</td>
<td>None</td>
<td>None</td>
<td>2 ppm TWA</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>2 mg/m3 TWA</td>
<td>2 mg/m3 TWA</td>
<td>4 mg/m3 STEL</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Toxicity: Skin contact may cause burns. Bonds skin rapidly and strongly. Skin and eye irritant.

Primary Routes of Entry: None known

Signs and Symptoms of Exposure: Vapor is irritating to eyes and mucous membranes above TLV. Prolonged and repeated overexposure to vapors may produce symptoms of non-allergic asthma in sensitive individuals.

Existing Conditions Aggravated by Exposure: None known

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Literature Referenced</th>
<th>Target Organ and Other Health Effects</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Butyl cyanoacrylate</td>
<td>ALG IRR RES</td>
<td>NTP IARC OSHA</td>
<td>NO NO NO</td>
</tr>
<tr>
<td>Trimellitic ester</td>
<td>No Data</td>
<td>NO NO NO</td>
<td>NO NO NO</td>
</tr>
<tr>
<td>Poly (methyl methacrylate)</td>
<td>IRR</td>
<td>NO N/A NO</td>
<td>NO N/A NO</td>
</tr>
</tbody>
</table>
Product Name: INST GLASS GLUE 2GR TB/CG
ID# 233841

3. HAZARDS IDENTIFICATION

HYDROQUINONE
AC3 BLO BNM CNS EYE IMM IRR LIV NO N/A NO MUT SKI THY

Abbreviations
N/A Not Applicable
AC3 ACGIH animal carcinogen.
ALG Allergen
BLO Blood
BNM Bone Marrow
CNS Central nervous system
EYE Eyes
IMM Immune system
IRR Irritant
LIV Liver
MUT Mutagen
RES Respiratory
SKI Skin
THY Thyroid

4. FIRST AID MEASURES

Ingestion: Ingestion is not likely. See supplemental page for emergency procedures.
Inhalation: Remove to fresh air. If symptoms persist, obtain medical attention.
Skin Contact: Soak in warm water. See supplemental page for emergency procedures.
Eye Contact: Flush with water. See supplemental page for emergency procedures.

5. FIRE FIGHTING MEASURES

Flash Point: 150 - 200 øF Method: Tag Closed Cup
Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical. Do not use water.
Special Firefighting Procedures: Not available
Hazardous Products formed by Fire or Thermal Decomp: Irritating organic fragments.
Unusual Fire or Explosion Hazards: May polymerize exothermically, especially upon contact with water.

Explosive Limits:
(% by volume in air)Lower Not available
(% by volume in air)Upper Not available
6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Flood with water to polymerize. Soak up with an inert absorbent.

7. HANDLING AND STORAGE

Safe Storage: Store at or below 75øF
(Contact Loctite Customer Service 1-800-243-4874 for shelf life information)
Handling: Avoid contact with skin and eyes. Avoid breathing vapor.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Nitrile or polyethylene gloves and aprons.
Do not use cotton.
See supplemental page for additional information.
Ventilation: Positive down-draft exhaust ventilation should be provided to maintain vapor concentration below TLV.
Respiratory NIOSH/MSHA approved respirator with organic vapors cartridge if ventilation is inadequate.
See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear liquid.
Odor: Sharp, irritating
Boiling Point: More than 300øF
pH: Does not apply
Solubility in Water: Polymerized by water
Specific Gravity 1.05 at 75øF
Volatile Organic Compound (EPA Method 24) Not available
Vapor Pressure: Less than 0.2 mm at 75øF
Vapor Density: Approximately 3
Evaporation Rate (Ether = 1) Not available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: May occur
Incompatibility: Polymerized by contact with water, alcohols, amines, alkalies.
Conditions to Avoid: Not available
Product Name: INST GLASS GLUE 2GR TB/CG
ID#: 233841

10. STABILITY AND REACTIVITY

Hazardous Decomposition
Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

Estimated oral LD50 more than 5000 mg/kg.
Estimated dermal LD50 more than 2000 mg/kg.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Incinerate following EPA and local regulations.
EPA Hazardous Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)
Domestic Ground Transport
Proper Shipping Name: Unrestricted (Not more than 450 liters);
Combustible liquids, n.o.s. (Cyanoacrylate ester)
(More than 450 liters)
Hazard Class or Division: Unrestricted (Not more than 450 liters)
Combustible liquid (More than 450 liters)
Identification Number: None (Not more than 450 liters);
NA 1993 (More than 450 liters)
Marine Pollutant: None
IATA
Proper Shipping Name: Unrestricted (Not more than one pint);
Aviation regulated liquid, n.o.s., (Cyanoacrylate Ester) (More than one pint)
Class or Division: Unrestricted (Not more than one pint);
Class 9 (More than one pint)
UN or ID Number: None (Not more than one pint)
UN 3334 (More than one pint)

15. REGULATORY INFORMATION

CA Proposition 65: No California Proposition 65 chemicals are known to be present.
16. OTHER INFORMATION

Estimated NFPA(R) Code:
- Health Hazard: 2
- Fire Hazard: 2
- Reactivity Hazard: 1
- Specific Hazard: Does not apply

Estimated HMIS(R) Code:
- Health Hazard: 2*
- Flammability Hazard: 2
- Reactivity Hazards: 1
- Personal Protection: See Section 8.

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HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared by:
Company: Safety, Health and Regulatory Affairs - North America,
Loctite Corp., 1001 Tr Br Cr, Rocky Hill CT 06067
(24hr.) Phone: (860) 571-5100
INFORMATION FOR FIRST AID AND CASUALTY ON TREATMENT FOR ADHESION OF HUMAN SKIN TO ITSELF IF CAUSED BY CYANOACRYLATE ADHESIVES

Cyanoacrylate adhesive is a very fast setting and strong adhesive. It bonds human tissue including skin in seconds. Experience has shown that accidents due to cyanoacrylates are handled best by passive, nonsurgical first aid. Treatment of specific types of accidents are given below.

SKIN CONTACT
Remove excess adhesive. Soak in warm, soapy water. The adhesive will come loose from the skin in several hours. Cured adhesive does not present a health hazard even when bonded to the skin.

Avoid contact with clothes, fabrics, rags, or tissue. Contact with these materials may cause polymerization. The polymerization of large amounts of adhesive will generate heat causing smoke, skin burns, and strong, irritating vapors. Wear nitrile or polyethylene gloves and apron when handling large amounts of adhesive.

SKIN ADHESION
First immerse the bonded surfaces in warm, soapy water. Peel or roll the surfaces apart with the aid of a blunt edge, e.g. a spatula or a teaspoon handle; then remove adhesive from the skin with soap and water. Do not try to pull surfaces apart with a direct opposing action.

EYELID TO EYELID OR EYEBALL ADHESION
In the event that eyelids are stuck together or bonded to the eyeball, wash thoroughly with warm water and apply a gauze patch. The eye will open without further action, typically in 1-4 days. There will be no residual damage. Do not try to open the eyes by manipulation.

ADHESIVE ON THE EYEBALL
Cyanoacrylate introduced into the eyes will attach itself to the eye protein and will disassociate from it over intermittent periods, generally covering several hours. This will cause periods of weeping until clearance is achieved. During the period of contamination, double vision may be experienced together with a lachrymatory effect, and it is important to understand the cause and realize that disassociation will normally occur within a matter of hours, even with gross contamination.

MOUTH
If lips are accidentally stuck together, apply lots of warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth. Peel or roll lips apart. Do not try to pull the lips
with direct opposing action.

It is almost impossible to swallow cyanoacrylate. The adhesive solidifies and adheres in the mouth. Saliva will lift the adhesive in one half to two days. In case a lump forms in the mouth, position the patient to prevent ingestion of the lump when it detaches.

BURNS
Cyanoacrylates give off heat on solidification. In rare cases a large drop will increase in temperature enough to cause a burn. Burns should be treated normally after the lump of cyanoacrylate is released from the tissue as described above.

SURGERY
It should never be necessary to use such a drastic method to separate accidentally bonded skin.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Loctite(R) Super Glue All Plastics

IDH No.: 685935

Product Type: Cyanoacrylate ester

2. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>7085-85-0</td>
<td>90-95</td>
</tr>
</tbody>
</table>

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>0.2 ppm TWA</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Toxicity: Skin contact may cause burns. Bonds skin rapidly and strongly. Skin and eye irritant. Estimated oral LD50 more than 5000mg/kg. Estimated dermal LD 50 more than 2000 mg/kg.

Primary Routes of Entry: None known

Signs and Symptoms of Exposure: Vapor is irritating to eyes and mucous membranes above TLV. Exposure to vapors above the established limits may cause symptoms of non-allergic asthma.

Existing Conditions Aggravated by Exposure: None known

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Target Organ and Other Health Effects</th>
<th>Carcinogen</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl cyanoacrylate</td>
<td>ALG IRR RES</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
</tbody>
</table>
3. HAZARDS IDENTIFICATION (continued)

Abbreviations

N/A Not Applicable  ALG Allergen
BLO Blood  BNM Bone Marrow
CNS Central nervous system  EYE Eyes
IMM Immune system  IRR Irritant
LIV Liver  MUT Mutagen
RES Respiratory  SKI Skin
THY Thyroid

4. FIRST AID MEASURES

Ingestion: Ingestion is not likely. See supplemental page for emergency procedures.
Inhalation: Remove to fresh air. If symptoms persist, obtain medical attention.
Skin Contact: Soak in warm water. See supplemental page for emergency procedures.
Eye Contact: Flush with water. See supplemental page for emergency procedures.

5. FIRE FIGHTING MEASURES

Flash Point: 176 - 200°F  Method: Tag Closed Cup
Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical
Special Firefighting Procedures: Not available
Hazardous Products formed by Fire or Thermal Decomp Irritating organic fragments.
Unusual Fire or Explosion Hazards: None

Explosive Limits:
(% by volume in air)Lower Not available
(% by volume in air)Upper Not available

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Flood with water to polymerize. Soak up with an inert absorbent.
Product Name: Loctite(R) Super Glue All Plastics
IDH No.: 685935

7. HANDLING AND STORAGE

Safe Storage: Store below 75 deg. F.
Handling: Avoid contact with skin and eyes. Avoid breathing vapor.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Nitrile or polyethylene gloves and aprons.
       Do not use cotton.
       See supplemental page for additional information.
Ventilation: Positive down-draft exhaust ventilation should be provided to maintain vapor concentration below TLV
Respiratory Not available
       See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: colorless liquid
Odor: Sharp, irritating
Boiling Point: More than 300°F
pH: Does not apply
Solubility in Water: Polymerized by water
Specific Gravity 1.05
Volatile Organic Compound (EPA Method 24) <2%
       Less than 20 g/l (California SCAQMD method 316B)
Vapor Pressure: Less than 0.2mm
Vapor Density: Approximately 3
Evaporation Rate (Ether = 1) Not available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: Polymerized by contact with water, alcohols, amines, alkalies.
Conditions to Avoid: Not available
Hazardous Decomposition Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

See Section 3.
12. ECOLOGICAL INFORMATION
No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal:
Polymerize as above.
Incinerate following EPA and local regulations.

EPA Hazardous Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation Ground (49 CFR):

Proper shipping name: Combustible liquids, n.o.s. (Cyanoacrylate ester)
Hazard class/division: Combustible liquid
Identification number: NA 1993
Packing group: None
Exceptions: (Not more than 450 Liters) Unrestricted
Marine pollutant: None

International Air Transportation (ICAO/IATA):

Proper shipping name: Aviation regulated liquids, n.o.s (Cyanoacrylate ester)
Greater than 500 ml
Hazard class/division: 9
Identification number: UN 3334
Packing group: None
Exceptions: (Not more than 500ml) Unrestricted

WaterTransportation (IMO/IMDG):

Proper shipping name: Unrestricted
Hazard class/division: None
Identification number: None
Packing group: None
Marine pollutant: None

15. REGULATORY INFORMATION

CA Proposition 65: No California Proposition 65 chemicals are known to be present.

16. OTHER INFORMATION

Estimated NFPA(R) Code:
Health Hazard: 2
Fire Hazard: 2
Reactivity Hazard: 1
Specific Hazard: Does not apply
16. OTHER INFORMATION

Estimated HMIS(R) Code:

Health Hazard: 2
Flammability Hazard: 2
Reactivity Hazards: 1
Personal Protection: See Section 8.

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HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared by:
Company: Regulatory Affairs
(24hr.) Phone: (440) 937-7000
INFORMATION FOR FIRST AID AND CASUALTY ON TREATMENT FOR ADHESION OF HUMAN SKIN TO ITSELF IF CAUSED BY CYANOACRYLATE ADHESIVES

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SKIN CONTACT
Remove excess adhesive. Soak in warm, soapy water. The adhesive will come loose from the skin in several hours. Cured adhesive does not present a health hazard even when bonded to the skin.

Avoid contact with clothes, fabrics, rags, or tissue. Contact with these materials may cause polymerization. The polymerization of large amounts of adhesive will generate heat causing smoke, skin burns, and strong, irritating vapors. Wear nitrile or polyethylene gloves and apron when handling large amounts of adhesive.

SKIN ADHESION
First immerse the bonded surfaces in warm, soapy water. Peel or roll the surfaces apart with the aid of a blunt edge, e.g. a spatula or a teaspoon handle; then remove adhesive from the skin with soap and water. Do not try to pull surfaces apart with a direct opposing action.

EYELID TO EYELID OR EYEBALL ADHESION
In the event that eyelids are stuck together or bonded to the eyeball, wash thoroughly with warm water and apply a gauze patch. The eye will open without further action, typically in 1-4 days. There will be no residual damage. Do not try to open the eyes by manipulation.

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MOUTH
If lips are accidentally stuck together, apply lots of warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth. Peel or roll lips apart. Do not try to pull the lips apart.

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BURNS
Cyanoacrylates give off heat on solidification. In rare cases a large drop will increase in temperature enough to cause a burn. Burns should be treated normally after the lump of cyanoacrylate is released from the tissue as described above.

SURGERY
It should never be necessary to use such a drastic method to separate accidentally bonded skin.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Loctite Super Glue All Plastics Activator
IDH No.: ACTIVATOR 685935
Part of Kit: 685935
Product Type: Activator

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients | CAS No. | %  
--- | --- | ---  
n-HEPTANE | 142-82-5 | 95-100

The substituted amine is registered with the state of New Jersey as a trade secret: NJ TSRN 06-070-1067-5076P.

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Exposure Limits (TWA)</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>OTHER</th>
</tr>
</thead>
</table>
n-HEPTANE | 400 ppm TWA 1640 mg/M3 | 500 ppm TWA 1600 mg/M3 | None |

<table>
<thead>
<tr>
<th>Exposure Limits (STEL)</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
</tr>
</thead>
</table>
n-HEPTANE | 500 ppm 2050 mg/M3 | 500 ppm 2000 mg/M3 |

3. HAZARDS IDENTIFICATION

Toxicity: Severe eye irritant. Skin irritant. Inhalation irritates nose and throat. Ingestion may irritate digestive tract and cause nausea, vomiting, and diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis, which can be fatal.

Primary Routes of Entry: Heptane: Inhalation, ingestion, contact.

Signs and Symptoms of Exposure: Inhalation: Dizziness, anesthesia, unconsciousness, difficulty in breathing. Skin and eyes: Redness

Existing Conditions Aggravated by Exposure: Skin disorders, heart conditions, respiratory disorders.
### 3. HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Literature Referenced</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-HEPTANE</td>
<td>Target Organ and Other Health Effects</td>
<td>NTP IARC OSHA</td>
</tr>
<tr>
<td></td>
<td>CNS IRR</td>
<td>NO NO NO</td>
</tr>
</tbody>
</table>

**Abbreviations**

- CNS: Central nervous system
- IRR: Irritant

### 4. FIRST AID MEASURES

- **Ingestion:** Do not induce vomiting. Keep individual calm. Obtain medical attention.
- **Inhalation:** Remove to fresh air. If symptoms persist, obtain medical attention.
- **Skin Contact:** Wash with soap and water.
- **Eye Contact:** Flush at least 15 minutes with water. Obtain medical attention.

### 5. FIRE FIGHTING MEASURES

- **Flash Point:** 30°F
- **Method:** Tag closed cup
- **Recommended Extinguishing Agents:** Carbon dioxide, foam, dry chemical
- **Special Firefighting Procedures:** Not available
- **Hazardous Products formed by Fire or Thermal Decomp:** Irritating organic vapors
- **Unusual Fire or Explosion Hazards:** Vapor may travel considerable distance to source ignition and flash back.

- **Explosive Limits:**
  - (% by volume in air)Lower: 1%
  - (% by volume in air)Upper: 7%

### 6. ACCIDENTAL RELEASE MEASURES

- **Steps to be taken in case of spill or leak:** Maintain good ventilation. Avoid ignition sources. Soak up remainder in an inert absorbent and store in a closed container until disposal.
Product Name: Loctite Super Glue All Plastics Activator
IDH No.: ACTIVATOR 685935

7. HANDLING AND STORAGE

Safe Storage: Store between 40 and 80°F in a tightly closed container away from oxidizing materials and sources of ignition.

Handling: Keep away from flame. Avoid prolonged breathing of vapors. Avoid skin or eye contact.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Rubber or plastic gloves.
Ventilation: Adequate to avoid exceeding TLV.
Respiratory: Not available

See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear liquid
Odor: Aliphatic
Boiling Point: 205-210°F
pH: Does not apply
Solubility in Water: Immiscible
Specific Gravity: 0.684
Volatile Organic Compound (EPA Method 24): Not available
Vapor Pressure: 35 mm at 68°F
Vapor Density: 3.45
Evaporation Rate (Ether = 1): 2.7

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: Strong oxidizers, strong acids or bases, selected amines, peroxides, acid chlorides, acid anhydrides alkali metals, ammonia.
Conditions to Avoid: Not available
Hazardous Decomposition Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

See Section 3.
12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Incinerate following EPA and local regulations.
EPA Hazardous Waste Number: D001 - Hazardous waste per 40CFR 261.21

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation Ground (49 CFR):

Proper shipping name: 
Hazard class or division: 
Identification number: 
Packing group: 
Exceptions: Not regulated for transport by ALL modes

International Air Transportation (ICAO/IATA):

Proper shipping name: 
Hazard class or division: 
Identification number: 
Packing group: 
Exceptions: Not regulated for transport by ALL modes

Water Transportation (IMO/IMDG):

Proper shipping name: 
Hazard class or division: 
Identification number: 
Packing group: 
Exceptions: Not regulated for transport by ALL modes

Marine pollutant: 

15. REGULATORY INFORMATION

CA Proposition 65: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

16. OTHER INFORMATION

Estimated NFPA(R) Code:
Health Hazard: 1
Fire Hazard: 3
Reactivity Hazard: 0
Specific Hazard: Does not apply
16. OTHER INFORMATION

Estimated HMIS(R) Code:
- Health Hazard: 1
- Flammability Hazard: 3
- Reactivity Hazards: 0
- Personal Protection: See Section 8.

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared by:
Company: Regulatory Affairs 8/08 Rev 5/09
(24hr.) Phone: (440) 937-7000
LOCTITE Aquarium Silicone 302 TB

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Loctite Clear Silicone
Product Type: Silicone
IDH: 908570

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly(dimethylsiloxane), dimethyl</td>
<td>63148-62-9</td>
</tr>
<tr>
<td>SILICA, AMORPHOUS, FUMED, CRYSSTALLINE-FREE</td>
<td>112945-52-5</td>
</tr>
<tr>
<td>Ethyltriacetoxy silane</td>
<td>17689-77-9</td>
</tr>
<tr>
<td>Methyltriacetoxy silane</td>
<td>4253-34-3</td>
</tr>
<tr>
<td>ACETIC ACID</td>
<td>64-19-7</td>
</tr>
</tbody>
</table>

***When this product is exposed to moisture, 3-5% acetic acid is formed.

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Exposure Limits</th>
<th>ACGIH (TWA)</th>
<th>OSHA (PEL)</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILICA, AMORPHOUS, FUMED, CRYSSTALLINE-FREE</td>
<td>10 mg/m3 TWA</td>
<td>6 mg/m3 TWA</td>
<td>3 mg/m3 TWA resp. dust</td>
</tr>
<tr>
<td>ACETIC ACID</td>
<td>10 ppm TWA</td>
<td>10 ppm TWA</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>25 mg/m3</td>
<td>25 mg/m3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Exposure Limits</th>
<th>ACGIH (TWA)</th>
<th>OSHA (PEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETIC ACID</td>
<td>15 ppm</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>37 mg/m3</td>
<td></td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Toxicity: Eye and skin irritant. Moderate by ingestion. When heated to temperatures above 3000F (1500C) in the presence of air, this product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard and a known skin and respiratory sensitizer. Vapors irritate eyes, nose and throat. Safe handling conditions may be maintained by
3. HAZARDS IDENTIFICATION

Primary Routes of Entry: Skin, ingestion, inhalation.

Signs and Symptoms of Exposure: Acetic acid produced during cure irritates eyes, nose, and throat. Prolonged or repeated exposure may irritate skin.

Existing Conditions Aggravated by Exposure: Methyltriacetoxysilane: Eye, skin, and pulmonary disorders.

Ingredients

<table>
<thead>
<tr>
<th>Literature Referenced</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Organ and Other Health Effects</td>
<td>NTP</td>
</tr>
</tbody>
</table>

Poly(dimethylsiloxane), dimethyl
SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE
Ethyltriacetoxysilane
Methyltriacetoxysilane
ACETIC ACID

Abbreviations

- N/A Not Applicable
- COR Corrosive
- GAS Gastrointestinal
- IRR Irritant
- NTO No Target Organs
- ALG Allergen
- EYE Eyes
- IMM Immune system
- KID Kidney
- NUI Nuisance dust

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Keep individual calm. Obtain medical attention.

Inhalation: Remove to fresh air. Treat symptomatically.

Skin Contact: Wipe off paste with paper towel or cloth. Wash exposed area with soap and water.

Eye Contact: Flush at least 15 minutes with water. Obtain medical attention.

5. FIRE FIGHTING MEASURES

Flash Point: More than 200°F

Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical
5. FIRE FIGHTING MEASURES

Special Firefighting Procedures: Not available

Hazardous Products formed by Fire or Thermal Decomp: Acetic acid, formaldehyde, silica fume.

Unusual Fire or Explosion Hazards: None

Explosive Limits:
(% by volume in air) Lower Acetic acid: 4%
(% by volume in air) Upper Acetic acid: 19.9% at 200°F.

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Wipe or scrape up spilled material. Maintain good ventilation for large spills. Place scrap material in a well ventilated place and allow to cure to rubber.

7. HANDLING AND STORAGE

Safe Storage: Store in a dry area below 90°F. Keep container closed when not in use.

Handling: Avoid breathing vapor. Avoid eye or skin contact. Acetic acid vapor released during application and cure. Do not wear contact lenses while applying material. Vapor may be trapped under lens.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Rubber or plastic gloves.
Ventilation: Provide local ventilation for prolonged use in confined area.
Respiratory: Not available

See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear paste
Odor: Sharp, Irritating
Boiling Point: Not Applicable, Polymeric material
pH: Does not apply
Solubility in Water: Polymerized
Specific Gravity: 1.01
Product Name: Loctite Clear Silicone

9. PHYSICAL AND CHEMICAL PROPERTIES

Volatile Organic Compound
(EPA Method 24) 3.08%
Vapor Pressure: 10mm at 80°F
Vapor Density: Not available
Evaporation Rate
(Ether = 1) Not available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: Polymerized by contact with moisture. Acetic acid liberated.
Conditions to Avoid: Not available
Hazardous Decomposition Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

Oral LD50 - 2060 mg/kg.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Cured rubber scrap can be incinerated. Follow EPA and local regulations.

EPA Hazardous Waste Number NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)
Domestic Ground Transport
Proper Shipping Name: Unrestricted
Hazard Class or Division: Unrestricted
Identification Number: None
Marine Pollutant: None

IATA
Proper Shipping Name: Unrestricted
Class or Division: Unrestricted
UN or ID Number: None
15. REGULATORY INFORMATION

CA Proposition 65: No California Proposition 65 chemicals are known to be present.

16. OTHER INFORMATION

Estimated NFPA(R) Code:
- Health Hazard: 2
- Fire Hazard: 1
- Reactivity Hazard: Does not apply

Estimated HMIS(R) Code:
- Health Hazard: 1
- Flammability Hazard: 1
- Reactivity Hazards: 1
- Personal Protection: See Section 8.

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared by:
(24hr.) Phone: (800) 624-7767
SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: LOCTITE STIK 'N SEAL ULTRA
HMIS Hazard Rating: Health: 1 Fire: 1 Reactivity: 0 PPE: B

Company Identification: HENKEL CORPORATION
7405 PRODUCTION DRIVE
MENTOR OH 44060

Contact (24 hour): Customer Affairs (800) 624-7767
Information phone/Fax: CHEMTREC Emergency (24 hour):(703) 527-3887 (International)
(800) 424-9300
in Canada CANUTEC 613-996-6666

Product Class: LOCTITE Sealant
Product Code: See no. above

SECTION II - INGREDIENT AND HAZARD INFORMATION

Hazardous Ingredient Name | CAS Number | Percent | TSCA
--- | --- | --- | ---
Vinyl Trimethoxysilane | 2768-02-7 | 5 - 10 | Y
Aminopropyl Trimethoxysilane | 13822-56-5 | < 5.0 | Y
N-3(Trimethoxysilyl)propyl ethylenediamine | 1760-24-3 | < 2.0 | Y
Methanol | 67-56-1 | TRACE | Y

Ingredient Notes:
Remaining ingredients are not considered OSHA hazardous.
Methanol (methyl alcohol) will be generated by curing of the product upon contact with water or humid air. The product as supplied may have methanol present in quantities of up to 0.40%.

SECTION III - PHYSICAL AND CHEMICAL PROPERTIES

Form: Viscous liquid
Appearance/Color: Clear
Solubility (in water): None
pH Value, +/- .3: Not Applicable
Boiling Range: Not Applicable
Vapor Pressure (mmHg): Not Available
Evaporation Rate: Unavailable
MATERIAL SAFETY DATA SHEET

MSDS Name: LOCTITE STIK 'N SEAL ULTRA
Version Number: 1
Revision Date: OCT-12-2007
Page Number: 2

Vapor Density: Heavier than air

% Volatile, Weight: Under 0.5%
% Volatile, Volume: Not Available
Specific Gravity: 1.174
VOC (less H20 or exempt): < 0.4%

SECTION IV - FIRE FIGHTING MEASURES
Flammability Class: IIIA
Flash Point: 160.°F (71.11°C)
Explosive Range (LEL/UEL): 0.7% to 28.2%

EXTINGUISHING MEDIA:
Carbon Dioxide---Dry Chemical---Foam
Use water to cool material in vicinity of fire.
SPECIAL FIRE-FIGHTING PROCEDURES:
Self-contained breathing apparatus and protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
Any container may rupture when exposed to extreme heat.
Use water to cool closed containers.

SECTION V - HEALTH HAZARD DATA

<table>
<thead>
<tr>
<th>Route</th>
<th>Species</th>
<th>Exposure and Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Methanol</td>
<td>LD50 10. PPM</td>
</tr>
</tbody>
</table>

ROUTES OF ENTRY:
ENTRY THROUGH... Inhalation and skin most likely

CARCINOGENICITY...
NTP? N/E  IARC Monographs? N/E  OHSA? NO

EFFECTS OF OVEREXPOSURE
Eyes: Can cause irritation, redness, tearing and corneal damage.
Skin: Prolonged or repeated contact can cause moderate irritation, dermatitis and possible sensitivity.
Inhalation: Excessive inhalation of vapors can cause respiratory irritation, headache, drowsiness, nausea, chest discomfort.
Ingestion: May cause gastrointestinal irritation or nausea.

FIRST AID MEASURES
Eyes: Immediately flush with water for at least 15 minutes, and get medical attention if irritation persists.
Skin: Remove completely with dry cloth or paper towel. Wash
thoroughly with soap and water.

Inhalation: Move person to fresh air.

Ingestion: May be harmful depending upon quantity ingested.

Get medical attention if ill effects develop.

CHRONIC HAZARDS
Persons suffering from allergic reactions to amines should avoid contact with the product.

Inhalation of Methanol may cause irritation or lung damage.

Chronic exposure to Methanol (skin, inhalation or oral) may damage the central nervous system, optic nerve, kidneys, and liver, impair vision, and cause respiratory failure.

SECTION VI - STABILITY AND REACTIVITY
Stability: Product is stable under normal storage conditions
Hazardous Polymerization: Will not occur under normal conditions

INCOMPATIBILITY:
Keep away from strong oxidizing agents, alkalies, acids, and water contamination.

CONDITIONS TO AVOID:
Exposure to air and moisture until ready to use.

HAZARDOUS DECOMPOSITION PRODUCTS:
Silicone dioxide, oxides of carbon, incompletely burned carbon products, calcium oxide.

SECTION VII - ACCIDENTAL RELEASE AND DISPOSAL MEASURES:

STEPS TO BE TAKEN IN CASE OF SPILL:
Ventilate confined areas. (Open windows and doors)
Wipe or scrape up material and put in a sealable safety container. Clean as appropriate to reduce hazard of slipping.

WASTE DISPOSAL METHOD:
Dispose of following local, state, and federal regulations.
Cured material is non-hazardous.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>ACGIH TLV</th>
<th>ACGIH TLV-C</th>
<th>ACGIH STEL</th>
<th>OSHA STEL</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>VinylTrimethoxysilane</td>
<td>200.00 PPM</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
</tr>
<tr>
<td>Aminopropyl Trimethoxysilane</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
</tr>
</tbody>
</table>
MSDS Name: LOCTITE STIK 'N SEAL ULTRA
Version Number: 1
Revision Date: OCT-12-2007
Page Number: 4

N-3(Trimethoxysilyl)propyl
ethlenediamine

<table>
<thead>
<tr>
<th></th>
<th>N/est</th>
<th>N/est</th>
<th>N/est</th>
<th>N/est</th>
<th>N/est</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>200.00 PPM</td>
<td>N/est</td>
<td>250.00 PPM</td>
<td>N/est</td>
<td>200.00 PPM</td>
</tr>
</tbody>
</table>

**RESPIRATORY PROTECTION:**
Use NIOSH approved respiratory protection if TLV is exceeded.

**VENTILATION:**
Use only in well ventilated areas.
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV.

**PROTECTIVE CLOTHING:**
Rubber gloves should be worn.

**EYE PROTECTION:**
Eye protection should be worn.

**HANDLING AND STORAGE PRECAUTIONS:**
Keep away from sunlight, heat and flame
Keep container tightly closed when not in use
Wear protective clothing, Wash skin thoroughly after use.
Avoid contact with eyes, skin or clothing.
KEEP OUT OF REACH OF CHILDREN

**SECTION IX - TRANSPORT INFORMATION:** (not all sizes available)

**GROUND TRANSPORT (DOT) - DOMESTIC**
Adhesive, Non-regulated

**AIR TRANSPORT (DOT) - DOMESTIC**
Adhesive, Non-regulated

**AIR TRANSPORT (IATA) - INTERNATIONAL**
Adhesive, Non-regulated

**MARINE - OCEAN TRANSPORT (IMDG)**
Adhesive, Non-regulated

**SECTION X - REGULATORY INFORMATION:**

SARA Section 311/312 Hazard Categories met:
Immediate (Acute) and Delayed (Chronic) Health Hazards
Chemical substances are TSCA listed.
SARA Section 313 toxic chemicals: NONE above the de minimis reporting thresholds.
MATERIAL SAFETY DATA SHEET

MSDS Name: LOCTITE STIK 'N SEAL ULTRA
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California PROP.65 Chemicals: none known

CANADA Note:
WHMIS CLASS: When labeled as Consumer Commodity this product is exempt from WHMIS regulations. (Sect. 12f Hazardous Products Act)

DISCLAIMER:
The information contained herein is based on data available as of the date of preparation of this MSDS and which we believe to be reliable. However, no warranty is expressed or implied regarding the accuracy of the data. We shall not be responsible for the use of this information, or of any product, method, apparatus mentioned, and user must make his own investigation to determine the suitability of the information or products for his particular purpose, for the protection of the environment, and the health & safety of the users of this material.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Stik 'N Seal No Mess
Product type: Anaerobic Sealant
Item No.: 212220

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact Information:
Telephone: (800) 424-7767
Emergency telephone: (613) 996-6666

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>%</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylic polymer</td>
<td>PROPRIETARY</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>2,2,4-Trimethyl-1,3-pentanediol</td>
<td>1-5</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>monoisobutyrate</td>
<td>25265-77-4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:
Physical state: Paste
Color: White
Odor: Characteristic

CAUTION: MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: May cause respiratory tract irritation.
Skin contact: May cause skin irritation.
Eye contact: May cause irritation.
Ingestion: May irritate mouth, throat, and stomach if swallowed.

Existing conditions aggravated by exposure:
Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.
4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If symptoms develop and persist, get medical attention.

Skin contact: Wash with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms occur.

Eye contact: Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.

Ingestion: Drink 1 or 2 glasses of water. Do not induce vomiting. Keep individual calm. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point: Greater than 93°C (200°F)  Tagliabue closed cup

Autoignition temperature: Not available

Flammable/Explosive limits-lower %: Not available

Flammable/Explosive limits-upper %: Not available

Extinguishing media: If product is involved in fire extinguish with dry powder, foam or carbon dioxide.

Special fire fighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: None


6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Prevent product from entering drains or open waters.

Clean-up methods: Soak up with inert absorbent. Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling.

Storage: For safe storage, store at or below 38°C (100°F). Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

Incompatible products: Refer to Section 10.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: No specific ventilation requirements noted, but forced ventilation may still be required if concentrations exceed occupational exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact. Neoprene gloves.

Eye/face protection: Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES
10. STABILITY AND REACTIVITY

Stability: Stable.
Hazardous polymerization: Will not occur.
Conditions to avoid: See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

11. TOXICOLOGICAL INFORMATION

Product toxicity data: Acute oral LD50 >5000mg/kg (rat)(estimated). Acute dermal LD50 >2000mg/kg (rabbit)(estimated).

Carcinogen Status

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylic polymer PROPRIETARY</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate 25265-77-4</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Literature Referenced Target Organ & Other Health Effects

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylic polymer PROPRIETARY</td>
<td>No data</td>
</tr>
<tr>
<td>2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate 25265-77-4</td>
<td>No Target Organs</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.
Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.
EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipping classifications in this section are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR):

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Product name</th>
</tr>
</thead>
<tbody>
<tr>
<td>212220</td>
<td>Loctite Stik ‘N Seal No Mess</td>
</tr>
</tbody>
</table>
Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA):
Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None
Packing group: None

WaterTransportation (IMO/IMDG):
Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None
Packing group: None
Marine pollutant: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None.

CERCLA/SARA Section 302 EHS: None above reporting de minimus.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard
CERCLA/SARA 313: None above reporting de minimus.

California Proposition 65: This product contains a chemical known to the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.
WHMiS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 15

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation’s products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE VINYL & PLASTIC ADHESIVE
Item number: IDH 1360694
Product Type: Solvent Adhesive

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>%</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl ethyl ketone</td>
<td>78-93-3</td>
<td>60-100</td>
<td>TWA: 590 STEL: 885 mg/m³ ACGIH (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 200 STEL: 300 ppm ACGIH (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 200 ppm OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 590 mg/m³ OSHA</td>
</tr>
<tr>
<td>Polyester based polyurethane</td>
<td>Proprietary</td>
<td>10-30</td>
<td>TWA: 10 mg/m³ Inhalation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 3 mg/m³ Respirable.</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

PHYSICAL STATE: Liquid. COLOR: Colorless. ODOR: Ketone.

DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR.
VAPOUR MAY CAUSE FLASH FIRE.
CAUSES SEVERE EYE IRRITATION.
MAY BE HARMFUL IF SWALLOWED.
MAY CAUSE SKIN AND RESPIRATORY TRACT IRRITATION.

Potential Health Effects

Eye:

Skin:
Mild skin irritation. Redness. Rash. Prolonged dermal contact may cause dermatitis and defatting. May cause burning and drying and cracking of skin, burns, and other skin damage.

Ingestion:
May be harmful if swallowed. Small amounts of liquid drawn into the lungs from swallowing or vomiting may cause severe health effects such as lung inflammation, bronchialpneumonia, or pulmonary edema.

Inhalation:
Mild respiratory tract irritation. Coughing. Inhalation of vapors may cause headache, nausea, or dizziness. Vapors are anesthetic.
Product name: LOCTITE VINYL & PLASTIC ADHESIVE
Item number: IDH 1360694

Conditions Aggravated by Exposure:
- Skin disorders
- Eye disorders
- Respiratory disorders
Chronic:
- Detailed information provided in section 11.

4. FIRST AID MEASURES

Eye:
- Immediately flush eyes with plenty of water for at least 15 minutes.
- Get medical attention.

Skin:
- Wash thoroughly with soap and water.
- Get medical attention if irritation develops and persists.

Ingestion:
- Do NOT induce vomiting unless directed to do so by medical personnel.
- Never give anything by mouth to an unconscious person.

Inhalation:
- Remove to fresh air.
- If symptoms develop and persist, get medical attention.

Note to Physician:
- This material is an aspiration hazard.
- Potential danger from aspiration must be weighed against oral toxicity when deciding whether to induce vomiting.

5. FIRE FIGHTING MEASURES

Flash Point:
- CLOSED CUP : 16.6 (-9.9). TCT

Extinguishing Media:
- Flammable liquid, soluble or dispersed in water.
- Use DRY chemical powder.

Flammable Limits:
- LOWER: 2%  UPPER: 11%

Special Fire Fighting Procedures:
- Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Hazardous Combustion Products:
- Oxides of carbon. Other toxic compounds.

Unusual Fire or Explosion Hazards:
- Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition and flash back.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak:
- Immediately contact emergency personnel.
- Eliminate all ignition sources.
- Keep unnecessary personnel away.
7. HANDLING AND STORAGE

Handling:
Keep away from heat, sparks and flame. Avoid contact with eyes. Avoid breathing vapor or mist. Avoid contact with skin and clothing. Wash thoroughly after handling. Ground and bond metal containers for liquid transfer to avoid static sparks.

Storage:
Store in a segregated and approved area. Keep in a cool and well-ventilated area. Keep container tightly closed and sealed until ready to use. Metal containers larger than five gallons should be grounded.

For information on product shelf life, contact Loctite Customer Service at 1(800)243-4874

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:
Not normally needed. Use local exhaust ventilation if the potential for airborne exposure exists.

Eye/Face Protection:
Chemical splash goggles or safety glasses with side shields. Full face shield should be used if the potential exists for splashing or spraying of product.

Skin Protection:
Chemical resistant, impermeable gloves are recommended.

Respiratory Protection:
Use NIOSH approved respirator if there is potential to exceed any exposure limit(s).

See Section 2 COMPOSITION/INFORMATION ON INGREDIENTS for exposure limits

9. PHYSICAL AND CHEMICAL PROPERTIES

Color: Colorless.
Material State: Liquid.
Odor: Ketone.
Boiling point: 176.8°F (80.0°C)
pH: Not available.
Solubility in Water: Soluble
Specific gravity: 0.86
VOC: Not available.
Vapor Pressure: 10.3 kPa (@ 20°C)
Vapor density: 2.5 (Air = 1)
Evaporation Rate: 5.7 compared to Butyl acetate.

10. STABILITY AND REACTIVITY

Stability:
Stable.
Product name: LOCTITE VINYL & PLASTIC ADHESIVE
Item number: IDH 1360694

Conditions to Avoid:
None known

Incompatibility:
Chlorinated compounds

Hazardous Polymerization:
Will not occur.

Hazardous Decomposition Products:
None known

11. TOXICOLOGY INFORMATION

Product Toxicology Data:
Not available.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl ethyl ketone</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Polyester based polyurethane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Ingredient                              Health Effects/Target organs
Methyl ethyl ketone                     Central nervous system.  Irritant.
Polyester based polyurethane            Not available.

12. ECOLOGICAL INFORMATION

Ecological Information:
None known

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal:
Dispose according to EPA and local governmental regulations.

EPA Hazardous Waste Number:
D001

14. TRANSPORTATION INFORMATION

Domestic Transportation (D.O.T. 49 CFR)-GROUND

Shipping Description:
Shipping name: Adhesives
Class/Division: 3
IDENTIFICATION Number: UN 1133
Packing group: II

Exceptions:
(Single unit less than or equal to 1 Liter)
Proper Shipping Name: Consumer Commodity, ORM-D
Product name: LOCTITE VINYL & PLASTIC ADHESIVE
Item number: IDH 1360694

International Air Transportation (ICAO/IATA)-
Shipping description:
  Shipping name: Adhesives
  Class/Division: 3
  Identification Number: UN 1133
  Packing group: II

Exceptions:
  Consumer Commodity, Class 9, ID 8000  (Not more than 500 grams)

International Marine - Ocean Transport (IMDG)
Units less than 5L (1.3 gallons, liquid)
  Proper Shipping Name: ADHESIVE
  Class/Division: 3
  Identification Number: UN1133
  Packing Group: II

Exceptions: Limited Quantity
Label Required: Flammable Liquid, UN113, Class 3, Ltd. Qty.
  (on ocean container only, not required on cartons)
Shipping Document: ADHESIVE, 3, UN1133, PGII, LTD.QTY.
EMS Code: F-E, S-D

Marine pollutant:
  None known

15. REGULATORY INFORMATION

SARA Title III Section 313 Chemicals:
  Methyl ethyl ketone
SARA Title III Section 311/312:
  Fire, Immediate health hazard, Delayed health hazard
Toxic Substances Control Act:
  All components are listed on or are exempt from listing on the Toxic
  Substances Control Act Inventory.
TSCA Section 12(b) annual:
  None.
TSCA Section 12(b) one time:
  None.
Canadian Inventory Status:
  All components are listed on or are exempt from listing on the Canadian
  Domestic Substances List.
California Proposition 65:
  This product contains chemicals known to the state of California to
  cause birth defects or other reproductive harm. (Toluene).

16. OTHER INFORMATION

NFPA Code:
  Health:  2
  Flammability:  1
  Reactivity:  0
  Special: None

HMIS Code:
  Health:  2  *
  Flammability:  1
  Reactivity:  0
  Protective Equipment: See Section 8.

(24hr.) Phone: (440) 937-7000
SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: LOCTITE SUMO for WOOD
HMIS Hazard Rating: Health: 2 Fire: 1 Reactivity: 1 PPE: B

Company Identification: HENKEL CORPORATION
7405 PRODUCTION DRIVE
MENTOR OH 44060

Contact (24 hour): Customer Affairs (800) 624-7767
Information phone/Fax: CHEMTREC Emergency (24 hour): (703) 527-3887 (International) (800) 424-9300
in Canada CANUTEC 613-996-6666

Product Class POLYURETHANE ADHESIVE
Trade Name LOCTITE

SECTION II - INGREDIENT AND HAZARD INFORMATION

Hazardous Ingredient Name CAS Number Percent TSCA
4,4' Diphenylmethane Diisocyanate 101-68-8 25 - 40 Y
Dimorpholinodiethyl ether 6425-39-4 5 - 10 Y

Ingredient Notes:
Remaining ingredients are not considered OSHA hazardous.

SECTION III - PHYSICAL AND CHEMICAL PROPERTIES

Form: Viscous liquid
Appearance/Color: tan
Solubility (in water): Reacts with water
pH Value, +/- .3: Not Applicable
Boiling Range: Over 350.°F (176.67°C)
Vapor Pressure (mmHg): Not Available
Evaporation Rate: Unavailable

Vapor Density: Not Available
% Volatile, Weight: Not Available
% Volatile, Volume: Not Available
Specific Gravity: 1.10123
VOC (less H20 or exempt): 0 Gr/l
SECTION IV - FIRE FIGHTING MEASURES
Flammability Class IIIB
Flash Point: Over 300.°F (148.89°C) Pensky-Martens Closed Cup ASTM D 93
Explosive Range (LEL/UEL): Not Applicable

EXTINGUISHING MEDIA:
Carbon Dioxide Dry Chemical---Foam--Sand

SPECIAL FIRE-FIGHTING PROCEDURES:
Use self-contained breathing apparatus with full facepiece operated in pressure demand or other positive pressure mode.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Water may be unsuitable except as a cooling agent. Use fog nozzle. Any closed container may rupture when exposed to extreme heat.

SECTION V - HEALTH HAZARD DATA

Route Species Exposure and Dose
4,4' Diphenylmethane Diisocyanate LC50 178. mg/M3

ROUTES OF ENTRY:
ENTRY THROUGH...

Inhalation? Yes Skin? Yes Ingestion? Yes

TARGET ORGANS...
Overexposure -- Diphenylmethane Diisocyanate: Skin, Eyes

CARCINOGENICITY...
NTP? N/E IARC Monographs? N/E OHSA? NO

EFFECTS OF OVEREXPOSURE
Eyes: Can cause irritation, redness, tearing and blurred vision.
Skin: Repeated contact can cause moderate irritation, dermatitis and possible sensitivity. Allergic reactions are possible.
Inhalation: Headaches, dizziness, nausea, decreased blood pressure, irritation, coughing, chest discomfort. See CHRONIC below.
Ingestion: Can cause gastrointestinal irritation, nausea.

FIRST AID MEASURES
Eyes: Flush with large amounts of water for at least 15 minutes lifting eyelids occasionally; get prompt medical attention
Skin: Wash thoroughly with soap and water; apply a mild skin cream. Remove contaminated clothing. Rubbing alcohol may help to remove uncured adhesive.
Cured adhesive may take several days to wear off.
Inhalation: Remove affected person to fresh air.
Ingestion: Get medical attention if ill effects develop.
CHRONIC HAZARDS
CHRONIC HAZARDS: Preexisting respiratory or skin conditions may be
aggravated by exposure. This product contains an isocyanate. Skin and
respiratory sensitization can result from repeated exposures to
isocyanates. For most individuals these effects are reversible.
Persons previously sensitized to isocyanates may experience an
allergic respiratory reaction: signs/symptoms can include difficulty
breathing, wheezing, tightness of chest, and respiratory failure.
Allergic response may be delayed several hours after exposure. Seek
immediate medical attention. If known allergy, do not use this product.

SECTION VI - STABILITY AND REACTIVITY
Stability: Product is stable under normal storage conditions
Hazardous Polymerization: Will not occur under normal conditions

INCOMPATABILITY:
Keep away from alcohols, amines, alkalies, acids,
and water contamination.

CONDITIONS TO AVOID:
Keep away from extreme heat.
Product cures in contact with water.

HAZARDOUS DECOMPOSITION PRODUCTS:
Will produce fumes and smoke containing carbon monoxide and
dioxide and nitrogen oxides and hydrogen cyanide under fire
conditions.

SECTION VII - ACCIDENTAL RELEASE AND DISPOSAL MEASURES:

STEPS TO BE TAKEN IN CASE OF SPILL:
Ventilate confined areas. (Open windows and doors)
Cover with absorbent, scoop into sealable safety container.
Wear protective clothing.
WASTE DISPOSAL METHOD:
Dispose of following local, state, and federal regulations.
Cured material can be disposed of as household waste.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

<table>
<thead>
<tr>
<th></th>
<th>ACGIH TLV</th>
<th>ACGIH TLV-C</th>
<th>ACGIH STEL</th>
<th>OSHA STEL</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4' Diphenylmethane Diisocyanate</td>
<td>N/est</td>
<td>0.01 PPM</td>
<td>N/est</td>
<td>N/est</td>
<td>0.02 PPM</td>
</tr>
<tr>
<td>Dimorpholinodiethyl ether</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---------------------------------------------
RESPIRATORY PROTECTION:
If TLV of the product is exceeded, wear NIOSH/MSHA jointly approved respiratory protection in the absence of proper ventilation. Follow applicable OSHA regulations.

VENTILATION:
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV. Ventilate during application and curing of this product.

PROTECTIVE CLOTHING:
Rubber gloves should be worn. Cover arms and legs to minimize exposure.

EYE PROTECTION:
Eye protection should be worn.

HANDLING AND STORAGE PRECAUTIONS:
Avoid contact with water, open and handle with care. Keep container tightly closed when not in use. Wash skin thoroughly after use. Avoid contact with eyes, skin or clothing. KEEP OUT OF REACH OF CHILDREN

SECTION IX - TRANSPORT INFORMATION: (not all sizes available)

GROUND TRANSPORT (DOT) - DOMESTIC
Adhesive, Non-regulated

AIR TRANSPORT (DOT) - DOMESTIC
Adhesive, Non-regulated

AIR TRANSPORT (IATA) - INTERNATIONAL
Adhesive, Non-regulated

MARINE - OCEAN TRANSPORT (IMDG)
Adhesive, Non-regulated

SECTION X - REGULATORY INFORMATION:
SARA TITLE III SECTION 313:
This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4' Diphenylmethane Diisocyanate</td>
<td>101-68-8</td>
<td>25 - 40</td>
</tr>
</tbody>
</table>
The material fits the EPA Hazard Category definition of Immediate (Acute) and Delayed (Chronic) health hazards under SARA Sections 311, 312.
California PROP.65 Chemicals: none known

DISCLAIMER:
The information contained herein is based on data available as of the date of preparation of this MSDS and which we believe to be reliable. However, no warranty is expressed or implied regarding the accuracy of the data. We shall not be responsible for the use of this information, or of any product, method, apparatus mentioned, and user must make his own investigation to determine the suitability of the information or products for his particular purpose, for the protection of the environment, and the health & safety of the users of this material.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name:</th>
<th>Loctite Plumber &amp; Marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item No.:</td>
<td>Item No. 1366077</td>
</tr>
<tr>
<td>Product type:</td>
<td>Adhesive</td>
</tr>
<tr>
<td>Company address:</td>
<td>Henkel Corporation</td>
</tr>
<tr>
<td></td>
<td>One Henkel Way</td>
</tr>
<tr>
<td></td>
<td>Rocky Hill, Connecticut 06067</td>
</tr>
<tr>
<td>Region:</td>
<td>United States</td>
</tr>
<tr>
<td>Contact Information:</td>
<td>Telephone: (800) 624-7767</td>
</tr>
<tr>
<td></td>
<td>Emergency telephone: (800) 424-9300</td>
</tr>
<tr>
<td></td>
<td>Internet: <a href="http://www.henkelna.com">www.henkelna.com</a></td>
</tr>
</tbody>
</table>

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>%</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>30-80</td>
<td>20 ppm TWA</td>
<td>200 ppm TWA</td>
<td>None</td>
</tr>
<tr>
<td>108-88-3</td>
<td></td>
<td></td>
<td>300 ppm Ceiling</td>
<td></td>
</tr>
<tr>
<td>n-Hexane</td>
<td>5-10</td>
<td>50 ppm TWA</td>
<td>1800 mg/m³ TWA</td>
<td>None</td>
</tr>
<tr>
<td>110-54-3</td>
<td></td>
<td>500 ppm TWA other than n-Hexane</td>
<td>500 ppm TWA</td>
<td></td>
</tr>
<tr>
<td>(skin)</td>
<td></td>
<td>1000 ppm STEL other than n-Hexane</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Gel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor:</td>
<td>Solvent</td>
</tr>
<tr>
<td>HMIS:</td>
<td></td>
</tr>
<tr>
<td>HEALTH:</td>
<td>2*</td>
</tr>
<tr>
<td>FLAMMABILITY:</td>
<td>3</td>
</tr>
<tr>
<td>PHYSICAL HAZARD:</td>
<td>1</td>
</tr>
<tr>
<td>Personal Protection:</td>
<td>See Section 8</td>
</tr>
<tr>
<td>DANGER:</td>
<td>EXTREMELY FLAMMABLE LIQUID AND VAPOR MAY BE HARMFUL IF INHALED. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.</td>
</tr>
</tbody>
</table>

Relevant routes of exposure: Inhalation, Eye contact, Skin contact, Ingestion

Potential Health Effects

**Inhalation:** May be harmful if inhaled. Vapors and mists will irritate nose and throat and possibly eyes. Vapors may cause headaches, nausea, dizziness and respiratory tract irritation.

**Skin contact:** May cause skin irritation with discomfort or rash. Prolonged contact with skin may cause dermatitis. Prolonged or repeated contact has caused severe dermatitis including blisters, cracking, edema and redness.

**Eye contact:** May cause severe eye irritation. Blurred vision. Redness. Tearing.

**Ingestion:** May cause an aspiration hazard if swallowed. Aspirated material can enter lungs and cause damage.

Existing conditions aggravated by exposure: Pre-existing skin, respiratory, central nervous system, liver and kidney conditions may be susceptible.

See Section 11 for additional toxicological information.
4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: Remove contaminated clothing and shoes. Wash with soap and water. Get medical attention if symptoms occur.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting: contains petroleum distillates and/or aromatic solvents. If vomiting occurs, prevent aspiration by keeping the patient's head below the knees. Aspiration may cause pulmonary edema and pneumonitis. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point: -23°C (-10°F) Pensky Martens closed cup

Autoignition temperature: Not available

Flammable/Explosive limits-lower %: 1.2 % (Toluene)

Flammable/Explosive limits-upper %: 8% (Toluene)

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special fire fighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: Do not store or use near heat, spark, open flame or other sources of ignition. Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition, and flash back. Closed containers may explode when exposed to extreme heat.


6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Prevent product from entering drains or open waters.

Clean-up methods: Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Spilled liquid is combustible and can be ignited by heat, flames, sparks, or other sources of ignition. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

7. HANDLING AND STORAGE

Handling: During use and until all vapors are gone: Keep area ventilated - do not smoke; extinguish all flames, pilot lights, and heaters; turn off stoves, electrical tools and appliances, and any other sources of ignition. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

Incompatible products: Refer to Section 10.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Use explosion-proof mechanical ventilation and local exhaust to control contaminants to within their occupational exposure limits during the use of this product.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Skin protection: Long sleeved clothing. Chemical resistant, impermeable gloves.

Item No.: 1366077

Product name: Loctite Plumber & Marine
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Gel
Color: Clear
Odor: Solvent
Vapor pressure: Not available
pH: Not applicable
Boiling point/range: 66-111°C (151-232°F)
Melting point/range: Not available
Specific gravity: 0.9074
Vapor density: Greater than 1
Evaporation rate: Greater than butyl acetate. (Butyl acetate = 1)
Solubility in water: Negligible.
Partition coefficient (n-octanol/water): Not available
VOC content: 48.1%; 437 grams/liter

10. STABILITY AND REACTIVITY

Stability: Stable.
Hazardous polymerization: Will not occur.
Incompatability: Oxidizing agents.
Conditions to avoid: Keep away from open flames, hot surfaces and sources of ignition. Storage with incompatible materials.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene 108-88-3</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>n-Hexane 110-54-3</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Literature Referenced Target Organ & Other Health Effects

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene 108-88-3</td>
<td>Behavioral, Cardiac, Central nervous system, Developmental, Ear, Irritant</td>
</tr>
<tr>
<td>n-Hexane 110-54-3</td>
<td>Developmental, Irritant, Lung, Nervous System, Reproductive</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

EPA hazardous waste number: D001: Ignitable.
14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR):
- **Proper shipping name:** Adhesives
- **Hazard class or division:** 3
- **Identification number:** UN 1133
- **Packing group:** II

International Air Transportation (ICAO/IATA):
- **Proper shipping name:** Adhesives
- **Hazard class or division:** 3
- **Identification number:** UN 1133
- **Packing group:** II

Water Transportation (IMO/IMDG):
- **Proper shipping name:** Adhesives
- **Hazard class or division:** 3
- **Identification number:** UN 1133
- **Packing group:** II

15. REGULATORY INFORMATION

**United States Regulatory Information**

- **TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- **TSCA 12 (b) Export Notification:** None.
- **CERCLA/SARA Section 302 EHS:** None.
- **CERCLA/SARA Section 311/312:** Fire, Immediate Health Hazard, Delayed Health Hazard
- **CERCLA/SARA 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Toluene (CAS# 108-88-3). n-Hexane (CAS# 110-54-3).
- **California Proposition 65:** This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**Canada Regulatory Information**

- **CEPA DSL/NDSL Status:** One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.
- **WHMIS hazard class:** B.2, D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 14

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE STIK N SEAL
Product type: Adhesive
Company address: Henkel Corporation
32150 Just Imagine Drive
Avon, Ohio 44011

IDH No. 230461
Region: United States
Contact Information:
Telephone: (440) 937-7000
Emergency telephone: (877) 279-0423

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>%</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>30-60</td>
<td>20 ppm TWA</td>
<td>200 ppm TWA</td>
<td>None</td>
</tr>
<tr>
<td>108-88-3</td>
<td></td>
<td></td>
<td>300 ppm Ceiling</td>
<td></td>
</tr>
<tr>
<td>n-Hexane</td>
<td>1-5</td>
<td>50 ppm TWA</td>
<td>1800 mg/m³ TWA</td>
<td>None</td>
</tr>
<tr>
<td>110-54-3</td>
<td></td>
<td>500 ppm TWA other than n-Hexane</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm STEL other than n-Hexane</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: EXTREMELY FLAMMABLE LIQUID AND VAPOR
MAY BE HARMFUL IF INHALED.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Eye contact, Skin contact, Ingestion

Potential Health Effects

Inhalation: May be harmful if inhaled. Vapors and mists will irritate nose and throat and possibly eyes. Vapors may cause headaches, nausea, dizziness and respiratory tract irritation.

Skin contact: May cause skin irritation with discomfort or rash. Prolonged contact with skin may cause dermatitis. Prolonged or repeated contact has caused severe dermatitis including blisters, cracking, edema and redness.

Eye contact: May cause severe eye irritation. Blurred vision. Redness. Tearing.

Ingestion: May cause an aspiration hazard if swallowed. Aspirated material can enter lungs and cause damage.

Existing conditions aggravated by exposure: Pre-existing skin, respiratory, central nervous system, liver and kidney conditions may be susceptible.

See Section 11 for additional toxicological information.
4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: Remove contaminated clothing and shoes. Wash with soap and water. Get medical attention if symptoms occur.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting: contains petroleum distillates and/or aromatic solvents. If vomiting occurs, prevent aspiration by keeping the patient's head below the knees. Aspiration may cause pulmonary edema and pneumonitis. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point: -23°C (-10°F) Pensky Martens closed cup

Autoignition temperature: Not available

Flammable/Explosive limits-lower %: 1.2 % (Toluene)

Flammable/Explosive limits-upper %: 8% (Toluene)

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special fire fighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: Do not store or use near heat, spark, open flame or other sources of ignition. Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition, and flash back. Closed containers may explode when exposed to extreme heat.


6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Prevent product from entering drains or open waters.

Clean-up methods: Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Spilled liquid is combustible and can be ignited by heat, flames, sparks, or other sources of ignition. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

7. HANDLING AND STORAGE

Handling: During use and until all vapors are gone: Keep area ventilated - do not smoke; extinguish all flames, pilot lights, and heaters; turn off stoves, electrical tools and appliances, and any other sources of ignition. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

Incompatible products: Refer to Section 10.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Use explosion-proof mechanical ventilation and local exhaust to control contaminants to within their occupational exposure limits during the use of this product.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Skin protection: Long sleeved clothing. Chemical resistant, impermeable gloves.
Eye/face protection: Chemical splash goggles or safety glasses with side shields. In a splash hazard environment, chemical goggles should be used in combination with a full face shield.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Gel
Color: Clear
Odor: Solvent
Vapor pressure: Not available
pH: Not applicable
Boiling point/range: 66-111°C (151-232°F)
Melting point/range: Not available
Specific gravity: 0.9074
Vapor density: Greater than 1
Evaporation rate: Greater than butyl acetate. (Butyl acetate = 1)
Solubility in water: Negligible.
Partition coefficient (n-octanol/water): Not available
VOC content: 48.1%; 437 grams/liter

10. STABILITY AND REACTIVITY

Stability: Stable.
Hazardous polymerization: Will not occur.
Incompatibility: Oxidizing agents.
Conditions to avoid: Keep away from open flames, hot surfaces and sources of ignition. Storage with incompatible materials.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

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<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene 108-88-3</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>n-Hexane 110-54-3</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Literature Referenced Target Organ & Other Health Effects

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene 108-88-3</td>
<td>Behavioral, Cardiac, Central nervous system, Developmental, Ear, Irritant</td>
</tr>
<tr>
<td>n-Hexane 110-54-3</td>
<td>Developmental, Irritant, Lung, Nervous System, Reproductive</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.
EPA hazardous waste number: D001: Ignitable.
14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR):

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>Adhesives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>3</td>
</tr>
<tr>
<td>Identification number:</td>
<td>UN 1133</td>
</tr>
<tr>
<td>Packing group:</td>
<td>II</td>
</tr>
</tbody>
</table>

International Air Transportation (ICAO/IATA):

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>Adhesives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>3</td>
</tr>
<tr>
<td>Identification number:</td>
<td>UN 1133</td>
</tr>
<tr>
<td>Packing group:</td>
<td>II</td>
</tr>
</tbody>
</table>

Water Transportation (IMO/IMDG):

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>Adhesives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>3</td>
</tr>
<tr>
<td>Identification number:</td>
<td>UN 1133</td>
</tr>
<tr>
<td>Packing group:</td>
<td>II</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: None.

CERCLA/SARA Section 302 EHS: None.

CERCLA/SARA Section 311/312: Fire, Immediate Health Hazard, Delayed Health Hazard

CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Toluene (CAS# 108-88-3). n-Hexane (CAS# 110-54-3).

California Proposition 65: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.


16. OTHER INFORMATION

Prepared by: Regulatory Affairs  440.937.7000  Rev 6/09

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
CONSUMER MATERIAL SAFETY DATA SHEET
NAME OF PRODUCT: Loctite Mounting Putty
MSDS DATE: 09-29-09

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Loctite Mounting Putty
IDH: 1087306
SUPPLIER: Henkel Corporation
ADDRESS: 32150 Just Imagine Drive
         Avon, Ohio 44011
PHONE: 440-937-7000
CHEMICAL FAMILY: Putty Adhesive
PRODUCT USE: Consumer Product; Mounting Putty

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT: CAS NO. % WT
Considered to be non-hazardous per OSHA standards
Product does not contain any solvents or toxic components

SECTION 3: HAZARDS IDENTIFICATION

Product is non-toxic in accordance to FHSA 16 CFR toxicity risk assessment (TRA) Toy Safety and is USP 61/ASTM and EN 71 approved

EMERGENCY OVERVIEW: This product is not expected to be Hazardous! This product is intended for consumer use.

ROUTES OF ENTRY: oral, dermal
POTENTIAL HEALTH EFFECTS
EYES: May cause slight irritation.
SKIN: Expected to be non-irritating
INGESTION: Low toxicity
INHALATION: Not expected to be a hazard under normal conditions of use.

SECTION 4: FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water until irritation subsides. If irritation persists, call a physician.
SKIN: Wash skin with soap and water. Seek medical attention if irritation persists.
INGESTION: No health risks if small quantities are ingested
INHALATION: Not Applicable.
SECTION 5: FIRE-FIGHTING MEASURES

NFPA HAZARD CLASSIFICATION
HEALTH: FLAMMABILITY: REACTIVITY: <0,0,0>
EXTINGUISHING MEDIA: water, CO2, Dry chemical
UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.
HAZARDOUS COMBUSTION PRODUCTS: None known.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Remove as much as possible mechanically. Remove residue with mineral terps or lighter fuel.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Indefinite (if kept in ambient temperatures)
Special Precautions and Storage: Avoid storage temperatures above 45 degrees C.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: not required under normal use conditions.
VENTILATION: not required under normal use conditions.
RESPIRATORY PROTECTION: not required under normal use conditions.
EYE PROTECTION: not required under normal use conditions.
SKIN PROTECTION: not required under normal use conditions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Blue Semi-Solid
ODOR: Little intrinsic odor.
PHYSICAL STATE: Solid
pH AS SUPPLIED: Neutral
SPECIFIC GRAVITY (H2O = 1): Not applicable
SOLUBILITY IN WATER: Not applicable
EVAPORATION RATE: Not applicable
VAPOR DENSITY: Not applicable
SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None known iff used for intend purpose
HAZARDOUS POLYMERIZATION: Will not occur
INCOMPATIBILITY: Solvents and oil

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: This product is not toxic as defined by the Federal Hazardous Substance Act.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Cured materials are non-hazardous and may be discarded in trash. Follow federal, state and local regulations that may be applicable for disposal of product and empty container.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
PROPER SHIPPING NAME: Not Regulated
HAZARD CLASS: N/A

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
This product is not a hazardous product as defined by the Federal Hazardous Substances Act.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: Information provided in this MSDS is intended to provide supplementary information for consumer uses of this product. This product is not intended for industrial uses. Contact Regulatory Affairs for additional information.
DISCLAIMER: The information appearing herein is furnished without express or implied warranty and is based upon tests and data believed to be accurate to the best knowledge of Henkel Corporation. It is the user’s responsibility to ensure that the product is handled safely and that the instructions for use are properly communicated and followed. Henkel Corporation assumes no legal responsibility or liability for any use not in accordance with the use described in this MSDS or in the product labeling.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Pro Bottle Epoxy-Resin
Product type: Epoxy resin
Item number: 1365736
Region: United States
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, CT 06067

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid
Color: Translucent, Clear
Odor: None

HEALTH: 2
FLAMMABILITY: 1
PHYSICAL HAZARD: 0

Personal Protection: See MSDS Section 8

WARNING: MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects
Inhalation: Mild respiratory tract irritation.
Skin contact: Allergic skin reaction. Moderate skin irritation. Itching. Redness.
Eye contact: Moderate eye irritation. Redness.
Ingestion: Not expected under normal conditions of use.

Existing conditions aggravated by exposure: Skin disorders. Skin allergies.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4’-isopropylidene diphenol resin</td>
<td>25068-38-6</td>
<td>60 - 100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms develop and persist, get medical attention.
Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention.
Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion: Keep individual calm. DO NOT induce vomiting unless directed to do so by medical personnel. If symptoms develop and persist, get medical attention.
5. FIRE FIGHTING MEASURES

Flash point: > 249 °C (> 480.2 °F) Pensky Martens closed cup
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Foam, dry chemical or carbon dioxide.
Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards: In case of fire, keep containers cool with water spray. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.
Clean-up methods: Remove all sources of ignition. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water. Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling: Do not breathe gas/fumes/vapor/spray. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed.
Storage: Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydin-4,4'-isopropylidene diphenol resin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.
Eye/face protection: Safety goggles or safety glasses with side shields.
Skin protection: Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Translucent, Clear
Odor: None
Odor threshold: Not available
pH: Not applicable
Vapor pressure: 0.03 mm Hg
Boiling point/range: > 260.2 °C (> 500.4 °F)
Melting point/ range: Not available
Specific gravity: 1.17
Vapor density: Not available
Flash point: > 249 °C (> 480.2 °F) Pensky Martens closed cup
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: Not available
Solubility in water: Slight
Partition coefficient (n-octanol/water): Not available
VOC content: 0.1 % (value for resin and hardener together)

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous reactions: Will not occur.
Hazardous decomposition products: None
Conditions to avoid: Excessive heat. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>Allergen, Irritant</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>None</td>
</tr>
<tr>
<td>Identification number:</td>
<td>None</td>
</tr>
<tr>
<td>Packing group:</td>
<td>None</td>
</tr>
</tbody>
</table>
15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Pro Bottle Epoxy-Hardener
Product type: Epoxy Hardener
Item number: 1365736
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, CT 06067

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:
- HEALTH: *3
- FLAMMABILITY: 1
- PHYSICAL HAZARD: 0
- Personal Protection: See MSDS Section 8

DANGER:
- Causes eye, skin and respiratory tract burns.
- May cause allergic skin reaction.
- Harmful if swallowed or absorbed through skin.

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects

Inhalation:
- Respiratory tract burns. May cause respiratory tract irritation. May cause irritation to nose and throat. Lung damage.

Skin contact:
- May cause skin burns. May cause allergic skin reaction. May be harmful if absorbed through skin. Rash. Redness. Tissue damage.

Eye contact:
- Burns. Severe eye irritation. Redness. Tissue damage.

Ingestion:
- May be harmful if swallowed. May cause burns of mouth and throat if swallowed.

Existing conditions aggravated by exposure:
- Eye, skin, and respiratory disorders. Skin allergies. Asthma.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptan</td>
<td>72244-98-5</td>
<td>60 - 100</td>
</tr>
<tr>
<td>m-Phenylenedibis(methylamine)</td>
<td>1477-55-0</td>
<td>10 - 30</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>90-72-2</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Phenol</td>
<td>108-95-2</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation:
- Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Thoroughly clean shoes before reuse. If symptoms develop and persist, get medical attention.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Keep individual calm. Get medical attention.

5. FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>&gt; 93 °C (&gt; 199.4 °F) Tagliabue closed cup</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable/Explosive limits - lower</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable/Explosive limits - upper</td>
<td>Not available</td>
</tr>
<tr>
<td>Extinguishing media</td>
<td>Water spray (fog), foam, dry chemical or carbon dioxide.</td>
</tr>
<tr>
<td>Special firefighting procedures</td>
<td>Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.</td>
</tr>
<tr>
<td>Unusual fire or explosion hazards</td>
<td>In case of fire, keep containers cool with water spray.</td>
</tr>
</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<table>
<thead>
<tr>
<th>Precaution</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental precautions</td>
<td>Do not allow product to enter sewer or waterways.</td>
</tr>
<tr>
<td>Clean-up methods</td>
<td>Remove all sources of ignition. Immediately contact emergency personnel.</td>
</tr>
<tr>
<td></td>
<td>Scrape up as much material as possible. Clean residue with soap and water.</td>
</tr>
<tr>
<td></td>
<td>Store in a closed container until ready for disposal.</td>
</tr>
</tbody>
</table>

7. HANDLING AND STORAGE

<table>
<thead>
<tr>
<th>Handling</th>
<th>Keep away from heat, spark and flame. Do not breathe gas/fumes/vapor/spray. Keep container closed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td>Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.</td>
</tr>
</tbody>
</table>

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.
### Hazardous components

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)]-a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>m-Phenylenebis(methylamine)</td>
<td>0.1 mg/m3 Ceiling (SKIN)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Phenol</td>
<td>5 ppm TWA (SKIN)</td>
<td>5 ppm (19 mg/m3) TWA (SKIN)</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

### Engineering controls:
Use local exhaust ventilation if the potential for airborne exposure exists.

### Respiratory protection:
Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

### Eye/face protection:
Safety goggles or safety glasses with side shields.

### Skin protection:
Chemical resistant, impermeable gloves.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Physical state:** Liquid
- **Color:** Amber, Translucent
- **Odor:** Amine, Mercaptan
- **Odor threshold:** Not available
- **pH:** Not available
- **Vapor pressure:** Not available
- **Boiling point/range:** Not available
- **Melting point/range:** Not available
- **Specific gravity:** 1.04
- **Vapor density:** Not available
- **Flash point:** > 93 °C (> 199.4 °F) Tagliabue closed cup
- **Flammable/Explosive limits - lower:** Not available
- **Flammable/Explosive limits - upper:** Not available
- **Autoignition temperature:** Not available
- **Evaporation rate:** Not available
- **Solubility in water:** Insoluble
- **Partition coefficient (n-octanol/water):** Not available
- **VOC content:** 3.77 %; 0.38 g/l EPA Method 24

### 10. STABILITY AND REACTIVITY

- **Stability:** Stable
- **Hazardous reactions:** Will not occur.
- **Conditions to avoid:** Excessive heat. Store away from incompatible materials.
11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
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<tbody>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>m-Phenylenebis(methylamine)</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Phenol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop</td>
<td>No Data</td>
</tr>
<tr>
<td>m-Phenylenebis(methylamine)</td>
<td>Irritant, Liver, Kidney, Corrosive</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>Irritant, Allergen</td>
</tr>
<tr>
<td>Phenol</td>
<td>Blood, Cardiac, Corrosive, Developmental, Eyes, Irritant, Kidney, Liver, Mutagen, Nervous System, Skin, Vascular</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Amines, liquid, corrosive, n.o.s. (aliphatic Amine)

Hazard class or division: 8

Identification number: UN 2735

Packing group: II

International Air Transportation (ICAO/IATA)

Proper shipping name: Amines, liquid, corrosive, n.o.s. (aliphatic Amine)

Hazard class or division: 8

Identification number: UN 2735

Packing group: II

Water Transportation (IMO/IMDG)

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (aliphatic Amine)

Hazard class or division: 8

Identification number: UN 2735

Packing group: II

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus

CERCLA/SARA Section 302 EHS: Phenol (CAS# 108-95-2).
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Phenol (CAS# 108-95-2).

California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: First issue.

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Loctite One Minute Epoxy Instant Mix  
Product Type: Epoxy

2. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESIN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>2508599-8</td>
<td>60-100</td>
</tr>
<tr>
<td>HARDENER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,5-Diazabicyclo [5.4.0] undec-5-ene</td>
<td>6674-22-2</td>
<td>1-5</td>
</tr>
<tr>
<td>2,2’-Oxybis(N,N-Dimethyl ethanamine)</td>
<td>3033-62-3</td>
<td>3-7</td>
</tr>
<tr>
<td>Poly alkoxylated hydroxyalkyl thiol</td>
<td>Proprietary</td>
<td></td>
</tr>
<tr>
<td>Triethylenetetramine, methyloxirane polymer</td>
<td>26950-63-0</td>
<td>7-13</td>
</tr>
</tbody>
</table>

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Exposure Limits (TWA)</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARDENER</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,5-Diazabicyclo [5.4.0] undec-5-ene</td>
<td>not available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,2’-Oxybis(N,N-Dimethyl ethanamine)</td>
<td>0.33mg/m3(TWA)</td>
<td>1.0 mg/m3 (STEL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly alkoxylated hydroxyalkyl thiol</td>
<td>not available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triethylenetetramine, methyloxirane polymer</td>
<td>not available</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Toxicity: Causes eye and skin burns. May cause allergic skin and respiratory reaction. May cause respiratory tract irritation. May be harmful if absorbed through skin.

Primary Routes of Entry: Ingestion, skin, inhalation, eye contact

Signs and Symptoms of Exposure: Eye or skin irritation or injury. Allergic responses such as sensitization or dermatitis.

Existing Conditions Aggravated by Exposure: Skin disorders. Skin allergies. Respiratory disorders. Eye disorders. Asthma
Product Name: Loctite One Minute Epoxy Instant Mix

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Literature Referenced</th>
<th>Target Organ and Other Health Effects</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESIN</td>
<td></td>
<td>ALG IRR</td>
<td>NO NO NO</td>
</tr>
<tr>
<td>HARDENER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,2′-Oxybis(N,N-Dimethyl ethanamine)</td>
<td>MUT COR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations

ALG Allergen    COR Corrosive    IRR Irritant    MUT Mutagen

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Keep individual calm. Obtain medical attention.

Inhalation: Remove to fresh air. If symptoms persist, obtain medical attention.

Skin Contact: Wash immediately with soap and water. Do not use solvents for cleaning skin. If irritation should develop, consult physician.

Eye Contact: Flush copiously with water for 20 minutes and get prompt medical attention. Washing within one minute is essential to achieve maximum effectiveness.

5. FIRE FIGHTING MEASURES

Flash Point: More than 93 °C (200°F) Method: Tag Closed Cup

Recommended Extinguishing Agents: Water spray (fog) Carbon dioxide, foam, dry chemical

Special Firefighting Procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Hazardous Products formed by Fire or Thermal Decomp: phenolics, carbon monoxide, carbon dioxide, hydrogen sulphide, oxides of sulphur and nitrogen.

Unusual Fire or Explosion Hazards: None

Explosive Limits: (% by volume in air)Lower Not available
(% by volume in air)Upper Not available

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Avoid skin contact. Scrape up as much as possible. Clean residues with solvent or soap and water.
7. HANDLING AND STORAGE

Handling: Keep away from heat, spark and flame. Do not breathe mist or
vapors. Keep container closed. Avoid contact with eyes, skin
and clothing. Wash thoroughly after handling.

Storage: Store at or below 100°F. Store in original container until ready
to use. Keep in a cool, well-ventilated area away from heat,
sparks and open flame. Keep container tightly closed until ready
for use.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Rubber gloves.
Ventilation: Sufficient to maintain vapor concentration
below TLV.
Respiratory Use a NIOSH approved air-purifying respirator if the
potential to exceed established exposure limits exists.

See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Hardener: yellow liquid Resin: colourless to pale yellow
Odor: Hardener: unpleasant/epoxy Resin: mild
Boiling Point: More than 300°F
pH: Not Applicable
Solubility in Water: Hardener: dispersable in water Resin: none
Specific Gravity Resin 1.16, Hardener 1.12
Vapor Pressure: Less than 5mm Hg at 20°C (68°F)
Vapor Density: Not available
Evaporation Rate (Ether = 1) Not Available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: Strong oxidizers, acids, Halogenated compounds. Strong
mineral acids. Reactive materials. Calcium
hypochlorite. Sodium hypochlorite. Nitrous acid and
other nitrosating agents.

Conditions to Avoid: Excessive heat. Storage with incompatible materials.
Product Name: Loctite One Minute Epoxy Instant Mix

11. TOXICOLOGICAL INFORMATION

See Section 3.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal:

Incinerate following EPA and local regulations.

14. TRANSPORTATION INFORMATION

All shipping descriptions result from components in hardener. Resin is not regulated.

DOT (49 CFR 172) Domestic Ground Transport

Proper Shipping Name: Consumer Commodity ORM-D (Not more than 1 liter);
Corrosive liquids, basic, organic, n.o.s.
(bicyclic amidine)
Class 8, Packing Group III (More than four liters)
UN 3267

IATA

Proper Shipping Name: Corrosive liquids, basic, organic, n.o.s.
(bicyclic amidine)
Class or Division: Class 8, Packing Group III
UN or ID Number: UN 3267

IMO/IMDG

Proper Shipping Name: Corrosive liquids, basic, organic, n.o.s.
(bicyclic amidine)
Class or Division: Class 8, Packing Group III
UN or ID Number: UN 3267

15. REGULATORY INFORMATION

CA Proposition 65: No Prop65 chemicals are known to be present.

16. OTHER INFORMATION

TSCA 8(b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: None

CERCLA/SARA Section 302 EHS: None above reporting minimus.
CERCLA/SARA Section 311/312: Immediate health hazard
CERCLA/SARA Section 313: None above reporting minimus.
Product Name: Loctite One Minute Epoxy Instant Mix

Estimated HMIS(R) Code:
- Health Hazard: 3
- Flammability Hazard: 1
- Reactivity Hazards: 1
- Personal Protection: See Section 8.

HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared by:
Company: Henkel Consumer Adhesive
Regulatory Affairs (440) 937-7000
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Plastix Bonder Epoxy - PART A  
Item No. : IDH No. 1363118  
Product type: Acrylics  
Region: United States  
Company address: Henkel Corporation  
One Henkel Way  
Rocky Hill, CT 06067  
Contact Information:  
Telephone: 800-624-7767  
Emergency telephone: 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>%</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate</td>
<td>30-60</td>
<td>100 ppm STEL</td>
<td>100 ppm TWA</td>
<td>50 ppm</td>
</tr>
<tr>
<td>80-62-6</td>
<td></td>
<td>10 ppm TWA</td>
<td>410 mg/m³ TWA</td>
<td></td>
</tr>
<tr>
<td>Polyethylene based rubber Proprietary</td>
<td>10-30</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Hydroxyalkyl methacrylate 868-77-9</td>
<td>10-30</td>
<td>None</td>
<td>None</td>
<td>3 ppm (ceiling)</td>
</tr>
<tr>
<td>Methacrylic acid 79-41-4</td>
<td>1-5</td>
<td>20 ppm TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Benzenecarboxylic acid, 1,1-dimethylethyl ester 614-45-9</td>
<td>1-5</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Talc 14807-96-6</td>
<td>0.1-1</td>
<td>2 mg/m³ TWA respirable fraction, particulate matter containing no asbestos and &lt; 1% crystalline silica = 20 mppcf TWA</td>
<td>50 ppm</td>
<td></td>
</tr>
<tr>
<td>Carbon tetrachloride 56-23-5</td>
<td>0.1-1</td>
<td>10 ppm STEL (skin)</td>
<td>10 ppm TWA</td>
<td>None</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

<table>
<thead>
<tr>
<th>HMIS:</th>
<th>HEALTH:</th>
<th>FLAMMABILITY:</th>
<th>PHYSICAL HAZARD:</th>
<th>Personal Protection:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2*</td>
<td>3</td>
<td>1</td>
<td>See Section 8</td>
</tr>
</tbody>
</table>

WARNING: FLAMMABLE LIQUID AND VAPOR. CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF SWALLOWED.

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects

Inhalation: Vapors may cause headaches, nausea, dizziness and respiratory tract irritation.

Skin contact: Irritating to skin. May cause allergic skin reaction.

Eye contact: Vapors may irritate eyes. Contact with eyes will cause irritation.

Ingestion: May be harmful if swallowed. Ingestion causes irritation and effects similar to inhalation.

Item No.: 1363118  
Product name: Loctite Plastix Bonder Epoxy - PART A
Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If symptoms develop and persist, get medical attention.

Skin contact: Wash with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms occur.

Eye contact: Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.

Ingestion: Do not induce vomiting. Keep individual calm. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point: 14°C (58°F) Setaflash Closed cup

Autoignition temperature: Not available

Flammable/Explosive limits-lower %: Not available

Flammable/Explosive limits-upper %: Not available

Extinguishing media: Foam, dry chemical or carbon dioxide.

Special fire fighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition, and flash back.


6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Prevent product from entering drains or open waters.

Clean-up methods: Remove all ignition sources. Ensure adequate ventilation. Soak up with inert absorbent. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. During use and until all vapors are gone: Keep area ventilated - do not smoke; extinguish all flames, pilot lights, and heaters; turn off stoves, electrical tools and appliances, and any other sources of ignition. Make sure containers are properly grounded before use or transfer of material.

Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. For safe storage, store at or below 32°C (90°F).

Incompatible products: Refer to Section 10.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Use local exhaust ventilation to maintain airborne concentrations below established exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Skin protection: Chemical resistant, impermeable gloves. Nitrile gloves.

Eye/face protection: Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Paste</td>
</tr>
<tr>
<td>Color</td>
<td>White Opaque</td>
</tr>
<tr>
<td>Odor</td>
<td>Sharp</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>28 mmHg @20°C (68° F)</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point/range</td>
<td>Greater than 100°C (212°F)</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.04</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Greater than 1</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Faster than ether (Ether = 1)</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Slight</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC content</td>
<td>0.3001%; 2.8646 grams/liter</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

Stability: Stable.

Hazardous polymerization: May occur.


Conditions to avoid: See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10). Do not mix in batches greater than 100 grams (0.220 pounds) unless you plan to use immediately.

### 11. TOXICOLOGICAL INFORMATION

**Carcinogen Status**

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate 80-62-6</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Polyethylene based rubber Proprietary</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Hydroxyalkyl methacrylate 868-77-9</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Methacrylic acid 79-41-4</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Benzenecarboperoxoic acid, 1,1-dimethylethyl ester 614-45-9</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Talc 14807-96-6</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Carbon tetrachloride 56-23-5</td>
<td>Suspect Carcinogen</td>
<td>Group 2B</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Literature Referenced Target Organ & Other Health Effects**

Item No.: 1363118

Product name: Loctite Plastix Bonder Epoxy - PART A
### 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Dispose of according to Federal, State and local governmental regulations.

**EPA hazardous waste number:** D001: Ignitable. D019: Carbon tetrachloride.

### 14. TRANSPORT INFORMATION

#### U.S. Department of Transportation Ground (49 CFR):

- **Proper shipping name:** Adhesives
- **Hazard class or division:** 3
- **Identification number:** UN 1133
- **Packing group:** II
- **Exceptions:** Consumer Commodity ORM-D (Not more than 5 L)
- **Marine pollutant:** None

#### International Air Transportation (ICAO/IATA):

- **Proper shipping name:** Adhesives
- **Hazard class or division:** 3
- **Identification number:** UN 1133
- **Packing group:** II
- **Exceptions:** May Qualify as Consumer Commodity ID8000 (Not more than 500 ml)

#### WaterTransportation (IMO/IMDG):

- **Proper shipping name:** Adhesives
- **Hazard class or division:** 3
- **Identification number:** UN1133
- **Packing group:** II
- **Marine pollutant:** None
15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: 4-Methoxyphenol (150-76-5).

CERCLA/SARA Section 302 EHS: None above reporting de minimus.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard, Fire
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Methyl Methacrylate (CAS# 80-62-6) . Carbon tetrachloride (CAS# 56-23-5).

California Proposition 65: This product contains a chemical known to the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 9

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Plastix Bonder Epoxy- Part B
Product type: Acrylics
Company address: Henkel Corporation
              One Henkel Way
              Rocky Hill, CT 06067

Item No.: 1363118
Region: United States

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>%</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate 80-62-6</td>
<td>60-100</td>
<td>100 ppm STEL</td>
<td>100 ppm TWA</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Nepheline syenite 37244-96-5</td>
<td>10-30</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Aldehyde-amine condensate  Proprietary</td>
<td>1-5</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Paste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Tan Opaque</td>
</tr>
<tr>
<td>Odor:</td>
<td>Strong</td>
</tr>
</tbody>
</table>

**HEALTH:**

2*

**FLAMMABILITY:**

3

**PHYSICAL HAZARD:**

1

**WARNING:**

FLAMMABLE LIQUID AND VAPOR. CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF SWALLOWED.

Relevant routes of exposure: Inhalation, Skin contact, Eye contact, Ingestion

Potential Health Effects

**Inhalation:**

Vapors may cause headaches, nausea, dizziness and respiratory tract irritation.

**Skin contact:**

May cause skin irritation. May cause allergic skin reaction.

**Eye contact:**

May cause irritation.

**Ingestion:**

May be harmful if swallowed.

Existing conditions aggravated by exposure:

Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.
4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If symptoms develop and persist, get medical attention.

Skin contact: Wash with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms occur.

Eye contact: Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.

Ingestion: Do not induce vomiting. Keep individual calm. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point: 14°C (58°F) Setaflash Closed cup

Autoignition temperature: Not available

Flammable/Explosive limits-lower %: Not available

Flammable/Explosive limits-upper %: Not available

Extinguishing media: Foam, dry chemical or carbon dioxide.

Special fire fighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition, and flash back.


6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Prevent product from entering drains or open waters.

Clean-up methods: Remove all ignition sources. Ensure adequate ventilation. Soak up with inert absorbent. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. During use and until all vapors are gone: Keep area ventilated - do not smoke; extinguish all flames, pilot lights, and heaters; turn off stoves, electrical tools and appliances, and any other sources of ignition. Make sure containers are properly grounded before use or transfer of material.

Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. For safe storage, store at or below 32°C (90°F).

Incompatible products: Refer to Section 10.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Use local exhaust ventilation to maintain airborne concentrations below established exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).


Eye/face protection: Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.
9. PHYSICAL AND CHEMICAL PROPERTIES

- **Physical state:** Paste
- **Color:** Tan Opaque
- **Odor:** Strong
- **Vapor pressure:** Not available
- **pH:** Not applicable
- **Boiling point/range:** Greater than 100°C (212°F)
- **Melting point/range:** Not available
- **Specific gravity:** 0.96
- **Vapor density:** Greater than 1
- **Evaporation rate:** Faster than ether (Ether = 1)
- **Solubility in water:** Slight
- **Partition coefficient (n-octanol/water):** Not available
- **VOC content:** 0.3001%; 2.8646 grams/liter

10. STABILITY AND REACTIVITY

- **Stability:** Stable.
- **Hazardous polymerization:** May occur.
- **Conditions to avoid:** See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10). Do not mix in batches greater than 100 grams (0.220 pounds) unless you plan to use immediately.

11. TOXICOLOGICAL INFORMATION

**Carcinogen Status**

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>80-62-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nepheline syenite</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>37244-96-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aldehyde-amine condensate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Proprietary</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Literature Referenced Target Organ & Other Health Effects**

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate</td>
<td>Allergen, Irritant, Kidney, Liver, Nervous System, Respiratory, Mutagen</td>
</tr>
<tr>
<td>80-62-6</td>
<td></td>
</tr>
<tr>
<td>Nepheline syenite</td>
<td>No Target Organs</td>
</tr>
<tr>
<td>37244-96-5</td>
<td></td>
</tr>
<tr>
<td>Aldehyde-amine condensate</td>
<td>No data</td>
</tr>
<tr>
<td>Proprietary</td>
<td></td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

- **Ecological information:** Not available

13. DISPOSAL CONSIDERATIONS

- **Information provided is for unused product only.**
- **Recommended method of disposal:** Dispose of according to Federal, State and local governmental regulations.
- **EPA hazardous waste number:** D001: Ignitable.

14. TRANSPORT INFORMATION
15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: 4-Methoxyphenol (150-76-5).

CERCLA/SARA Section 302 EHS: None.
CERCLA/SARA Section 311/312: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Methyl Methacrylate (CAS# 80-62-6).

CERCLA/SARA 313: None.

California Proposition 65: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: B.2, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 9

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE Epoxy Pro Bottle Extra Time- RESIN  
Product type: Epoxy resin  
Item number: 1365850  
Region: United States

Company address:  
Henkel Corporation  
One Henkel Way  
Rocky Hill, CT 06067  
Contact information:  
Telephone: 800.624.7767  
Emergency telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

Physical state: Liquid  
Color: Translucent, Clear  
Odor: None  
HEALTH: 2  
FLAMMABILITY: 1  
PHYSICAL HAZARD: 0  
Personal Protection: See MSDS Section 8

WARNING: MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: Mild respiratory tract irritation.
Skin contact: Allergic skin reaction. Moderate skin irritation. Itching. Redness.
Eye contact: Moderate eye irritation. Redness.
Ingestion: Not expected under normal conditions of use.

Existing conditions aggravated by exposure: Skin disorders. Skin allergies.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>25068-38-6</td>
<td>60 - 100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms develop and persist, get medical attention.
Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention.
Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion: Keep individual calm. DO NOT induce vomiting unless directed to do so by medical personnel. If symptoms develop and persist, get medical attention.
5. FIRE FIGHTING MEASURES

Flash point: > 249 °C (> 480.2 °F) Pensky Martens closed cup
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Foam, dry chemical or carbon dioxide.
Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards: In case of fire, keep containers cool with water spray. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods: Remove all sources of ignition. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water. Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling: Do not breathe gas/fumes/vapor/spray. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed.

Storage: Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Translucent, Clear
Odor: None
Odor threshold: Not available
pH: Not applicable
Vapor pressure: 0.03 mm Hg
Boiling point/range: > 260.2 °C (> 500.4 °F)
Melting point/range: Not available
Specific gravity: 1.17
Vapor density: Not available
Flash point: > 249 °C (> 480.2 °F) Pensky Martens closed cup
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: Not available
Solubility in water: Slight
Partition coefficient (n-octanol/water): Not available
VOC content: 0.1 % (value for resin and hardener together)

10. STABILITY AND REACTIVITY
Stability: Stable
Hazardous reactions: Will not occur.
Hazardous decomposition products: None
Conditions to avoid: Excessive heat. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>Allergen, Irritant</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION
Ecological information: Not available

13. DISPOSAL CONSIDERATIONS
Information provided is for unused product only.
Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.
Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION
U.S. Department of Transportation Ground (49 CFR)

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>None</td>
</tr>
<tr>
<td>Identification number:</td>
<td>None</td>
</tr>
<tr>
<td>Packing group:</td>
<td>None</td>
</tr>
</tbody>
</table>
15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE Epoxy Pro Bottles Extra Time - HARDENER
Product type: Epoxy Hardener
Item number: 1365850
Region: United States

Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid
Color: Transparent, Light amber
Odor: Amine

HEALTH: *3
FLAMMABILITY: 1
PHYSICAL HAZARD: 0

DANGER: CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS. MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION. HARMFUL IF SWALLOWED, ABSORBED THROUGH SKIN OR INHALED.

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects

Inhalation: Harmful if inhaled; may cause delayed lung damage. Respiratory tract burns. May cause lung damage. May cause nose, throat and lung irritation. Inhalation of aerosol may cause irritation to the upper respiratory tract. Can cause severe eye, skin and respiratory tract burns. May cause nose, throat, and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system. May cause central nervous system effects with nausea, dizziness and headache. Severe cases of overexposure can result in respiratory failure. Inhalation of vapors or mists of the product may be irritating to the respiratory system. May cause allergic respiratory reaction.

Skin contact: Harmful in contact with skin. Causes skin burns. May cause central nervous system effects. Headache, nausea, dizziness, confusion, breathing difficulties. May cause allergic skin reaction.

Eye contact: Corneal edema may give appearance of "blue haze" or "fog" around lights. Causes eye burns. May cause blindness. Severe eye irritation.

Ingestion: Harmful if swallowed. If ingested, severe burns of the mouth and throat may occur, as well as perforation of the esophagus and the stomach.


This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>C36 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer</td>
<td>68082-29-1</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Amines</td>
<td>Unknown</td>
<td>10 - 30</td>
</tr>
<tr>
<td>4-Tert-butylphenol</td>
<td>98-54-4</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Aliphatic amines</td>
<td>Unknown</td>
<td>10 - 30</td>
</tr>
<tr>
<td>1,2-Ethanediamine, N-(2-aminoethyl)-, polymer with oxirane</td>
<td>28063-82-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystal-free</td>
<td>112945-52-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>112-24-3</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Thoroughly clean shoes before reuse. If symptoms develop and persist, get medical attention.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: DO NOT induce vomiting unless directed to do so by medical personnel. Keep individual calm. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point: 100 °C (212°F) ; Estimated

Autoignition temperature: Not available

Flammable/Explosive limits - lower: Not available

Flammable/Explosive limits - upper: Not available

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: In case of fire, keep containers cool with water spray.


6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods: Remove all sources of ignition. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water.
7. HANDLING AND STORAGE

Handling: Keep away from heat, spark and flame. Wash thoroughly after handling. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists of this product. Keep container closed.

Storage: Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>C36 Fatty acid dimer, tall oil fatty acid, triethyleneetetramine polymer</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Amines</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>4-Tert-butylphenol</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Aliphatic amines</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1,2-Ethanediamine, N-(2-aminoethyl)-, polymer with oxirane</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>None</td>
<td>None</td>
<td>10 ppm (44 mg/m³) TWA</td>
<td>None</td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystal-free</td>
<td>10 mg/m³ TWA Inhalable dust. 3 mg/m³ TWA Respirable fraction</td>
<td>20 MPPCF TWA 0.8 mg/m³ TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>None</td>
<td>None</td>
<td>1 ppm (6 mg/m³) TWA (SKIN)</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Use local exhaust ventilation if the potential for airborne exposure exists.
Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Eye/face protection: Safety goggles or safety glasses with side shields.
Skin protection: Chemical resistant, impermeable gloves. Neoprene, Butyl-rubber, or nitrile-rubber gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical state: | Liquid |
| Color: | Transparent, Light amber |
| Odor: | Amine |
| pH: | Not available |
| Vapor pressure: | Not available |
| Boiling point/range: | Not available |
| Melting point/ range: | Not available |
| Specific gravity: | 1 |
| Vapor density: | Not available |
| Flash point: | 100 °C (212°F) ; Estimated |
| Flammable/Explosive limits - lower: | Not available |
| Flammable/Explosive limits - upper: | Not available |
| Autoignition temperature: | Not available |
| Evaporation rate: | Not available |
| Solubility in water: | Not available |
| Partition coefficient (n-octanol/water): | Not available |
| VOC content: | 0.1 g/l (calculated) |
10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous reactions: Will not occur.
Hazardous decomposition products: None
Incompatible materials: Strong acids, Strong oxidizing agents, Halogenated compounds, Strong mineral acids, Reactive metals, Calcium hypochlorite, Sodium hypochlorite, Nitrous acid and other nitrosating agents.
Conditions to avoid: Excessive heat. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C36 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Amines</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>4-Tert-butylphenol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Aliphatic amines</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>1,2-Ethanediame, N-(2-aminoethyl)-, polymer with oxirane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystal-free</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>C36 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer</td>
<td>No Records</td>
</tr>
<tr>
<td>Amines</td>
<td>No Data</td>
</tr>
<tr>
<td>4-Tert-butylphenol</td>
<td>Irritant, Allergen, Skin, Corrosive</td>
</tr>
<tr>
<td>Aliphatic amines</td>
<td>No Data</td>
</tr>
<tr>
<td>1,2-Ethanediame, N-(2-aminoethyl)-, polymer with oxirane</td>
<td>No Records</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>Allergen, Central nervous system, Corrosive, Irritant</td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystal-free</td>
<td>Nuisance dust</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>Allergen, Corrosive, Developmental, Irritant, Mutagen</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>Corrosive liquids, n.o.s. (p-tert Butyl phenol)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>8</td>
</tr>
<tr>
<td>Identification number:</td>
<td>UN 1760</td>
</tr>
<tr>
<td>Packing group:</td>
<td>III</td>
</tr>
</tbody>
</table>
15. REGULATORY INFORMATION

United States Regulatory Information

<table>
<thead>
<tr>
<th>TSCA 8 (b) Inventory Status</th>
<th>All components are listed or are exempt from listing on the Toxic Substances Control Act inventory.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA 12(b) Export Notification</td>
<td>None above reporting de minimus</td>
</tr>
<tr>
<td>CERCLA/SARA Section 302 EHS</td>
<td>None above reporting de minimus</td>
</tr>
<tr>
<td>CERCLA/SARA Section 311/312</td>
<td>Immediate Health, Delayed Health</td>
</tr>
<tr>
<td>CERCLA/SARA 313</td>
<td>None above reporting de minimus</td>
</tr>
<tr>
<td>California Proposition 65</td>
<td>No California Proposition 65 listed chemicals are known to be present.</td>
</tr>
</tbody>
</table>

Canada Regulatory Information

<table>
<thead>
<tr>
<th>CEPA DSL/NDSL Status</th>
<th>All components are listed on or are exempt from listing on the Domestic Substances List.</th>
</tr>
</thead>
</table>

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: First issue.

Prepared by: Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Loctite Quick Set 5 minute Epoxy Instant Mix
Item No.: 01-06924
Product Type: Epoxy

2. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESIN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisphenol A epoxy resin</td>
<td>250-68-38-6</td>
<td>60-100</td>
</tr>
<tr>
<td>HARDENER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercaptan terminated polymer</td>
<td>Proprietary*</td>
<td>60-100</td>
</tr>
<tr>
<td>Modified Amine</td>
<td>52338-87-1</td>
<td>0-20</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Toxicity: Causes eye and skin irritation. May cause sensitization by skin contact. May cause respiratory tract irritation.

Primary Routes of Entry: Ingestion, skin, inhalation, eye contact
Signs and Symptoms of Exposure: Eye or skin irritation or injury. Allergic responses such as sensitization or dermatitis.
Existing Conditions Aggravated by Exposure: Skin disorders. Skin allergies. Respiratory disorders. Eye disorders. Asthma

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Keep individual calm. Obtain medical attention.
Inhalation: Remove to fresh air. If symptoms persist, obtain medical attention.
Skin Contact: Wash immediately with soap and water. Do not use solvents for cleaning skin. If irritation should develop, consult physician.
Eye Contact: Flush with plenty of water for 20 minutes and get prompt medical attention. Washing within one minute is essential to achieve maximum effectiveness.
5. FIRE FIGHTING MEASURES

Flash Point: \( > 150°C \) (302°F)  Method: Tag Closed Cup

Recommended Extinguishing Agents: Water spray (fog) Carbon dioxide, foam, dry chemical
Special Firefighting Procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Toxic gases may be released during fire. Hazardous Products formed by Fire or Thermal Decomp: phenolics, carbon monoxide, carbon dioxide, oxides of sulphur and nitrogen.

Unusual Fire or Explosion Hazards: The smoke may contain polymer fragments of varying compositions.

Explosive Limits:
(\% by volume in air)Lower Not available
(\% by volume in air)Upper Not available

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Wear appropriate personal protective equipment. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin, eyes or clothing.

7. HANDLING AND STORAGE

Handling: Ensure good ventilation during processing. Do not breathe mist or vapors. Keep container closed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Storage: Store between 35 and 120°F. Store in original container until ready to use. Keep in a cool, well-ventilated area away.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Rubber gloves. Immediately remove all contaminated clothing.
Ventilation: For the product at ambient temperature, use adequate ventilation. For the heated product, use exhaust ventilation to remove vapor.
Respiratory: No respiratory protection should be needed.
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Viscous liquid
Appearance: Hardener: clear liquid Resin: colourless to pale yellow
Odor: Hardener: unpleasant/epoxy Resin: mild
Boiling Point: > 500°F (resin)
pH: 6-7 (resin); 3-5 (hardener)
Solubility in Water: Hardener: dispersable in water Resin: negligible in water
Specific Gravity: Resin 1.18, Hardener 1.1
Vapor Pressure: < 0.13 @ 356°F (kPa), resin
Viscosity (@86°F): Resin: 6000-8000 cps, Hardener: 10000-15000 cps

10. STABILITY AND REACTIVITY

Stability: Stable at normal temperature and pressure.
Hazardous Polymerization: Will not occur
Incompatibility: Strong oxidizers, acids, Halogonated compounds. Strong
mineral acids. Reactive materials. Calcium
hypochlorite. Sodium hypochlorite. Nitrous acid and
other nitrosating agents.
Conditions to Avoid: This product is normally stable and is not reactive with

11. TOXICOLOGICAL INFORMATION

Toxicity (resin): >5,000 mg/kg (LD50 - Rat)
(hardener): >2,000 mg/kg (LD50 - Rat)

Irritating to skin and eyes.

12. ECOLOGICAL INFORMATION

Ecological toxicity: Large quantities of product should not be allowed to enter
water courses or be deposited where it can affect ground or surface water.
Degradability (resin): Theoretical oxygen demand (ThoD) is calculated to be 2.35 p/p. In the
atmospheric environment, material is estimated to have a tropospheric half
life of 1.92 hr.

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Dispose of in accordance with federal, state and local
regulations.
Product Name: Loctite Quick Set 5 minute Epoxy Instant Mix
Item No.: 01-06924

14. TRANSPORTATION INFORMATION

DOT (49 CFR 172) Domestic Ground Transport
   Proper Shipping Name: Not regulated for transport

IATA
   Proper Shipping Name: Not regulated for transport

IMO/IMDG
   Proper Shipping Name: Not regulated for transport

15. REGULATORY INFORMATION

CA Proposition 65: No Prop65 chemicals are known to be present.

16. OTHER INFORMATION

TSCA 8(b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None

CERCLA/SARA Section 302 EHS: None above reporting de minimus.
CERCLA/SARA Section 311/312: None.
CERCLA/SARA Section 313: None above reporting de minimus.

Estimated HMIS(R) Code:
   Health Hazard: 1
   Flammability Hazard: 1
   Reactivity Hazards: 0
   Personal Protection: See Section 8.

HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared by:
Company: Henkel Consumer Adhesive
Regulatory Affairs (440) 937-7000
Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Marine Epoxy-Resin
Product type: Epoxy resin
Item number: 1405604
Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 800.624.7767
Emergency telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

<table>
<thead>
<tr>
<th>HMIS:</th>
<th>HEALTH:</th>
<th>*2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state:</td>
<td>Liquid, Paste</td>
<td></td>
</tr>
<tr>
<td>Color:</td>
<td>Tan</td>
<td></td>
</tr>
<tr>
<td>Odor:</td>
<td>Slight</td>
<td></td>
</tr>
</tbody>
</table>

WARNING: MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: Mild respiratory tract irritation. Coughing.
Skin contact: May cause allergic skin reaction. Moderate skin irritation. Itching. Redness.
Eye contact: Moderate eye irritation. Excess tearing.
Ingestion: Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: Skin disorders. Skin allergies.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4’-isopropylidene diphenol resin</td>
<td>25068-38-6</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.

Skin contact: Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention. Wash clothing before reuse.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
5. FIRE FIGHTING MEASURES

Flash point: 204.44 °C (399.99 °F) ; Estimated
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards: Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Follow all local, state, federal and provincial regulations for disposal.
Clean-up methods: Scrape up as much material as possible. Clean residue with soap and water. Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not taste or swallow.
Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>10 mg/m3 TWA Total dust.</td>
<td>5 mg/m3 TWA Respirable fraction. 15 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Engineering controls: Use local exhaust ventilation if the potential for airborne exposure exists.
Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Eye/face protection: Safety goggles or safety glasses with side shields.
Skin protection: Chemical resistant, impermeable gloves.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid, Paste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Tan</td>
</tr>
<tr>
<td>Odor:</td>
<td>Slight</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not available</td>
</tr>
<tr>
<td>pH:</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point/range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point/ range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>1.56</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point:</td>
<td>204.44 °C (399.99 °F) : Estimated</td>
</tr>
<tr>
<td>Flammable/Explosive limits - lower:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable/Explosive limits - upper:</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature:</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC content:</td>
<td>0 % (calculated)</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous reactions: Will not occur.
Hazardous decomposition products: None
Conditions to avoid: Store away from incompatible materials.

### 11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>Allergen, Irritant</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>Nuisance dust</td>
</tr>
</tbody>
</table>

### 12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)
Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (epoxy resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: epoxy resin
Exceptions: Classified per IMDG Amendment 34; Effective Jan 1, 2010.

15. REGULATORY INFORMATION

United States Regulatory Information
TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information
CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: First issue.

Prepared by: Regulatory Affairs
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Marine Epoxy- Hardener
Product type: Epoxy Hardener
Item number: 1405604
Region: United States
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:
Physical state: Liquid, Paste
Color: White
Odor: Amine
HEALTH: *3
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
DANGER: CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS. MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN.

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects

Inhalation: Respiratory tract burns. May be harmful if inhaled. Shortness of breath. Coughing.
Skin contact: Causes skin burns. May be harmful if absorbed through skin. May cause allergic skin reaction. Itching. Rash. Pain and discomfort. Tissue damage.
Ingestion: May be harmful if swallowed.


This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Aliphatic amine</td>
<td>Unknown</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>5 - 10</td>
</tr>
<tr>
<td>3-Aminomethyl-3,5,5-trimethylcyclohexylamine</td>
<td>2855-13-2</td>
<td>5 - 10</td>
</tr>
<tr>
<td>1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched</td>
<td>68479-04-9</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>1 - 5</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>90-72-2</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Propanediol-1,2</td>
<td>57-55-6</td>
<td>1 - 5</td>
</tr>
<tr>
<td>N-Aminoethylpiperazine</td>
<td>140-31-8</td>
<td>1 - 5</td>
</tr>
<tr>
<td>4-Tert-butylphenol</td>
<td>98-54-4</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

Inhalation: If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Eye contact: Flush eye(s) immediately with plenty of water. Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get immediate medical attention.

5. FIRE FIGHTING MEASURES

Flash point: 96.11 °C (205°F); Estimated

Autoignition temperature: Not available

Flammable/Explosive limits - lower: Not available

Flammable/Explosive limits - upper: Not available

Extinguishing media: Use dry chemical, water spray or carbon dioxide. Alcohol-resistant foam.

Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Caution should be exercised when using water or foam as frothing may occur. In case of fire, keep containers cool with water spray.

Unusual fire or explosion hazards: Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. Decomposition and combustion products may be toxic.


6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods: Follow all local, state, federal and provincial regulations for disposal.

7. HANDLING AND STORAGE

Handling: Avoid breathing dust. Do not taste or swallow. Avoid contact with eyes, skin and clothing. Do not get in eyes. Do not get on skin or clothing. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.
### Hazardous components

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m³ TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable.</td>
<td>0.1 mg/m³ TWA Respirable.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.3 mg/m³ TWA Total dust.</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Aliphatic amine</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>10 mg/m³ TWA Total dust.</td>
<td>5 mg/m³ TWA Respirable fraction.</td>
<td>15 mg/m³ TWA Total dust.</td>
<td>None</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>3-Aminomethyl-3,5,5-trimethylcyclohexylamine</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10 mg/m³ TWA</td>
<td>15 mg/m³ TWA Total dust.</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Propanediol-1,2</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>N-Aminoethylpiperazine</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>4-Tert-butylphenol</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**Engineering controls:** Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

**Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

**Eye/face protection:** Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

**Skin protection:** Chemical resistant, impermeable gloves. Neoprene gloves. Nitrile gloves. Butyl rubber gloves. Viton gloves.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state:</td>
<td>Liquid, Paste</td>
</tr>
<tr>
<td>Color:</td>
<td>White</td>
</tr>
<tr>
<td>Odor:</td>
<td>Amine</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not available</td>
</tr>
<tr>
<td>pH:</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point/range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point/range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>1.49</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point:</td>
<td>96.11 °C (205°F); Estimated</td>
</tr>
<tr>
<td>Flammable/Explosive limits - lower:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable/Explosive limits - upper:</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature:</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC content:</td>
<td>0 %; 0 g/l (calculated)</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous reactions: Will not occur.
Hazardous decomposition products: None

Conditions to avoid: Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO₂)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
<tr>
<td>Aliphatic amine</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3- Aminomethyl-3,5,5- trimethylcyclohexylamine</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Propanediol-1,2</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>N-Aminoethylpiperazine</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>4-Tert-butylphenol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO₂)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
<tr>
<td>Aliphatic amine</td>
<td>No Data</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>Nuisance dust</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>Allergen, Central nervous system, Corrosive, Irritant</td>
</tr>
<tr>
<td>3- Aminomethyl-3,5,5-trimethylcyclohexylamine</td>
<td>Irritant, Allergen, Corrosive, Lung</td>
</tr>
<tr>
<td>1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched</td>
<td>No Target Organs</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Irritant, Respiratory, Some evidence of carcinogenicity</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>Irritant, Allergen</td>
</tr>
<tr>
<td>Propanediol-1,2</td>
<td>Irritant</td>
</tr>
<tr>
<td>N-Aminoethylpiperazine</td>
<td>Irritant, Corrosive, Allergen</td>
</tr>
<tr>
<td>4-Tert-butylphenol</td>
<td>Irritant, Allergen, Skin, Corrosive</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)
Proper shipping name: Polyamines, liquid, corrosive, n.o.s. (aliphatic Amine, Isophoronediamine)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III

International Air Transportation (ICAO/IATA)
Proper shipping name: Polyamines, liquid, corrosive, n.o.s. (aliphatic Amine, Isophoronediamine)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III

Water Transportation (IMO/IMDG)
Proper shipping name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (aliphatic Amine, Isophoronediamine)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III

15. REGULATORY INFORMATION

United States Regulatory Information
TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information
CEPA DSL/NDSL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: First issue.

Prepared by: Regulatory Affairs Specialist
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Metal/Concrete Epoxy-Resin
Product type: Epoxy resin
Item number: 1405605
Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 800.624.7767
Emergency telephone: 800.424.9300
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid, Paste
Color: Grey, Metallic
Odor: Slight

**HEALTH:**

*2

**FLAMMABILITY:**

1

**PHYSICAL HAZARD:**

0

**Personal Protection:** See MSDS Section 8

WARNING:

MAY CAUSE ALLERGIC SKIN REACTION.
CAUSES EYE AND SKIN IRRITATION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: May cause respiratory tract irritation. Coughing.
Skin contact: May cause allergic skin reaction. Causes skin irritation. Redness.
Eye contact: Causes eye irritation. Direct contact may cause temporary redness and discomfort.
Ingestion: Not expected to be harmful by ingestion.


This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>25068-38-6</td>
<td>30-60</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>30-60</td>
</tr>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1-1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention.
Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point: > 96.11 °C (> 205°F); Estimated
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards: Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.
Clean-up methods: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal.

7. HANDLING AND STORAGE

Handling: Keep container closed. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists of this product. Wash thoroughly after handling. Use only with adequate ventilation.

Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.
### Hazardous components

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>None</td>
<td>5 mg/m³ TWA (Respirable fraction)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>10 mg/m³ TWA (Total dust)</td>
<td>15 mg/m³ TWA (Total dust)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Aluminum</td>
<td>1 mg/m³ TWA (Respirable fraction)</td>
<td>15 mg/m³ TWA (as Al) (Total dust)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO₂)</td>
<td>0.025 mg/m³ TWA (Respirable fraction)</td>
<td>2.4 MPPCF TWA (Respirable)</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

#### Engineering controls:
Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.

#### Respiratory protection:
Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

#### Eye/face protection:
Safety goggles or safety glasses with side shields.

#### Skin protection:
Chemical resistant, impermeable gloves.

---

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Physical state:** Liquid, Paste
- **Color:** Grey, Metallic
- **Odor:** Slight
- **Odor threshold:** Not available
- **pH:** Not available
- **Vapor pressure:** Not available
- **Boiling point/range:** Not available
- **Melting point/range:** Not available
- **Specific gravity:** 1.63
- **Vapor density:** Not available
- **Flash point:** > 96.11 °C (> 205°F) ; Estimated
- **Flammable/Explosive limits - lower:** Not available
- **Flammable/Explosive limits - upper:** Not available
- **Autoignition temperature:** Not available
- **Evaporation rate:** Not available
- **Solubility in water:** Not available
- **Partition coefficient (n-octanol/water):** Not available
- **VOC content:** 0% (calculated)

---

### 10. STABILITY AND REACTIVITY

- **Stability:** Stable
- **Hazardous reactions:** Will not occur.
- **Hazardous decomposition products:** None
- **Incompatible materials:** Amines. Strong oxidizing agents. Strong acids and strong bases.
- **Conditions to avoid:** Direct sources of heat.
11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Aluminum</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>Allergen, Irritant</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>Nuisance dust</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Central nervous system, Irritant, Lung</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrine resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Bisphenol-A Epichlorhydrine resin
Exceptions: Classified per IMDG Amendment 34; Effective Jan 1, 2010.

15. REGULATORY INFORMATION

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA 313: None above reporting de minimus

IDH number: 1405605

Product name: Loctite Metal/Concrete Epoxy-Resin
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.


16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: First issue.

Prepared by: Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Metal/Concrete Epoxy-Hardener
Product type: Epoxy Hardener
Item number: 1405605
Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

2. HAZARDS IDENTIFICATION

DANGERS:
- Causes eye, skin and respiratory tract burns.
- May be harmful if swallowed or absorbed through skin.

Relevant routes of exposure:
- Skin, Inhalation, Eyes, Ingestion

Potential Health Effects:
- Inhalation: Respiratory tract burns. May cause respiratory tract irritation. May cause irritation to nose and throat. Lung damage.
- Skin contact: May cause skin burns. May be harmful if absorbed through skin. Rash. Redness. Tissue damage.
- Eye contact: Burns. Severe eye irritation. Redness. Tissue damage.
- Ingestion: May be harmful if swallowed. May cause burns of mouth and throat if swallowed.

Existing conditions aggravated by exposure:
- Eye, skin, and respiratory disorders. Skin allergies.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptoc</td>
<td>72244-98-5</td>
<td>30 - 60</td>
</tr>
<tr>
<td>m-Phenylenediis(methylamine)</td>
<td>1477-55-0</td>
<td>5 - 10</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>90-72-2</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Phenol</td>
<td>108-95-2</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Thoroughly clean shoes before reuse. If symptoms develop and persist, get medical attention.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting. Keep individual calm. Never give anything by mouth to an unconscious person. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point: > 93 °C (> 199.4 °F) Tagliabue closed cup

Autoignition temperature: Not available

Flammable/Explosive limits - lower: Not available

Flammable/Explosive limits - upper: Not available

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: In case of fire, keep containers cool with water spray.


6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods: Remove all sources of ignition. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling: Keep away from heat, spark and flame. Do not breathe gas/fumes/vapor/spray. Keep container closed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Storage: For safe storage, store at or below 37.8 °C (100°F). Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

IDH number: 1405605

Product name: Loctite Metal/Concrete Epoxy- Hardener
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium carbonate</td>
<td>10 mg/m³ TWA</td>
<td>5 mg/m³ TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Total dust.</td>
<td>Respirable fraction.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 mg/m³ TWA</td>
<td>Total dust.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptan</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>m-Phenylenebis(methylamine)</td>
<td>0.1 mg/m³ Ceiling (SKIN)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>5 ppm TWA (SKIN)</td>
<td>5 ppm (19 mg/m³) TWA (SKIN)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Phenol</td>
<td>0.025 mg/m³ TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m³ TWA Respirable. 0.3 mg/m³ TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Use local exhaust ventilation if the potential for airborne exposure exists.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid, Paste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Off white</td>
</tr>
<tr>
<td>Odor:</td>
<td>Amine, Mercaptan</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not available</td>
</tr>
<tr>
<td>pH:</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point/range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point/range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>1.6</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point:</td>
<td>&gt; 93 °C (&gt; 199.4 °F) Tagliabue closed cup</td>
</tr>
<tr>
<td>Flammable/Explosive limits - lower:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable/Explosive limits - upper:</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature:</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC content:</td>
<td>0.04 % EPA Method 24</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Stability: Stable

Hazardous reactions: Will not occur.


Incompatible materials: Strong acids and strong bases. Strong oxidizing agents.

Conditions to avoid: Excessive heat. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium carbonate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Poly[oxymethyl-1,2-ethanediyl], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>m-Phenylenediamine</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Phenol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium carbonate</td>
<td>Nuisance dust</td>
</tr>
<tr>
<td>Poly[oxymethyl-1,2-ethanediyl], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop</td>
<td>No Data</td>
</tr>
<tr>
<td>m-Phenylenediamine</td>
<td>Irritant, Liver, Kidney, Corrosive</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>Irritant, Allergen</td>
</tr>
<tr>
<td>Phenol</td>
<td>Blood, Cardiac, Corrosive, Developmental, Eyes, Irritant, Kidney, Liver, Mutagen, Nervous System, Skin, Vascular</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>U.S. Department of Transportation Ground (49 CFR)</th>
<th>Proper shipping name: Amines, liquid, corrosive, n.o.s. (m-Xylylenediamine)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division: 8</td>
<td>Identification number: UN 2735</td>
</tr>
<tr>
<td>Packing group: III</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>International Air Transportation (ICAO/IATA)</th>
<th>Proper shipping name: Amines, liquid, corrosive, n.o.s. (m-Xylylenediamine)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division: 8</td>
<td>Identification number: UN 2735</td>
</tr>
<tr>
<td>Packing group: III</td>
<td></td>
</tr>
</tbody>
</table>
**Water Transportation (IMO/IMDG)**

- **Proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (m-Xylylenediamine)
- **Hazard class or division:** 8
- **Identification number:** UN 2735
- **Packing group:** III

**15. REGULATORY INFORMATION**

**United States Regulatory Information**

- **TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- **TSCA 12(b) Export Notification:** None above reporting de minimus
- **CERCLA/SARA Section 302 EHS:** Phenol (CAS# 108-95-2).
- **CERCLA/SARA Section 311/312:** Immediate Health
- **CERCLA/SARA 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Phenol (CAS# 108-95-2).
- **California Proposition 65:** This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**Canada Regulatory Information**

- **CEPA DSL/NDSL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
- **WHMIS hazard class:** D.2.A, D.2.B, E

**16. OTHER INFORMATION**

This material safety data sheet contains changes from the previous version in sections: First issue.

**Prepared by:** Regulatory Affairs Specialist

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Quick Set Epoxy-Resin
Product type: Epoxy resin
Item number: 1395391
Region: United States
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, CT 06067

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

| Physical state: | Liquid |
| Color:          | Translucent, Clear |
| Odor:           | None |
| HEALTH:         | 2 |
| FLAMMABILITY:   | 1 |
| PHYSICAL HAZARD:| 0 |
| Personal Protection: | See MSDS Section 8 |

WARNING: MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: Mild respiratory tract irritation.
Skin contact: Allergic skin reaction. Moderate skin irritation. Itching. Redness.
Eye contact: Moderate eye irritation. Redness.
Ingestion: Not expected under normal conditions of use.

Existing conditions aggravated by exposure: Skin disorders. Skin allergies.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4’-isopropylidene diphenol resin</td>
<td>25068-38-6</td>
<td>60 - 100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms develop and persist, get medical attention.
Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention.
Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion: Keep individual calm. DO NOT induce vomiting unless directed to do so by medical personnel. If symptoms develop and persist, get medical attention.
5. FIRE FIGHTING MEASURES

Flash point: > 249 °C (> 480.2 °F) Pensky Martens closed cup
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Foam, dry chemical or carbon dioxide.
Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards: In case of fire, keep containers cool with water spray. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.
Clean-up methods: Remove all sources of ignition. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water. Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling: Do not breathe gas/fumes/vapor/spray. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed.
Storage: Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.
Eye/face protection: Safety goggles or safety glasses with side shields.
Skin protection: Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Translucent, Clear
Odor: None
Odor threshold: Not available
pH: Not applicable
Vapor pressure: 0.03 mm Hg
Boiling point/range: > 260.2 °C (> 500.4 °F)
Melting point/ range: Not available
Specific gravity: 1.17
Vapor density: Not available
Flash point: > 249 °C (> 480.2 °F) Pensky Martens closed cup
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: Not available
Solubility in water: Slight
Partition coefficient (n-octanol/water): Not available
VOC content: 0.1 % (value for resin and hardener together)

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous reactions: Will not occur.
Hazardous decomposition products: None
Conditions to avoid: Excessive heat. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Hazardous components

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>Allergen, Irritant</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>U.S. Department of Transportation Ground (49 CFR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name:</td>
</tr>
<tr>
<td>Hazard class or division:</td>
</tr>
<tr>
<td>Identification number:</td>
</tr>
<tr>
<td>Packing group:</td>
</tr>
</tbody>
</table>
15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation’s products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation’s products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Quickset Epoxy-Hardener
Product type: Epoxy Hardener
Item number: 1395391
Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, CT 06067

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:  
Physical state: Liquid  
Color: Amber, Translucent  
Odor: Amine, Mercaptan  
HEALTH: *3  
FLAMMABILITY: 1  
PHYSICAL HAZARD: 0  
DANGER: CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS. MAY CAUSE ALLERGIC SKIN REACTION. HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN.  
Personal Protection: See MSDS Section 8

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects

Inhalation: Respiratory tract burns. May cause respiratory tract irritation. May cause irritation to nose and throat. Lung damage.
Skin contact: May cause skin burns. May cause allergic skin reaction. May be harmful if absorbed through skin. Rash. Redness. Tissue damage.
Eye contact: Burns. Severe eye irritation. Redness. Tissue damage.
Ingestion: May be harmful if swallowed. May cause burns of mouth and throat if swallowed.

Existing conditions aggravated by exposure:
Eye, skin, and respiratory disorders. Skin allergies. Asthma.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop</td>
<td>72244-98-5</td>
<td>60 - 100</td>
</tr>
<tr>
<td>m-Phenylenedibis(methylamine)</td>
<td>1477-55-0</td>
<td>10 - 30</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>90-72-2</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Phenol</td>
<td>108-95-2</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Thoroughly clean shoes before reuse. If symptoms develop and persist, get medical attention.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Keep individual calm. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point: > 93 °C (> 199.4 °F) Tagliabue closed cup
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards: In case of fire, keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.
Clean-up methods: Remove all sources of ignition. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling: Keep away from heat, spark and flame. Do not breathe gas/fumes/vapor/spray. Keep container closed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
Storage: Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.
Hazardous components

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptol</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>m-Phenylenebis(methylamine)</td>
<td>0.1 mg/m3 Ceiling (SKIN)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Phenol</td>
<td>5 ppm TWA (SKIN)</td>
<td>5 ppm (19 mg/m3) TWA (SKIN)</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Use local exhaust ventilation if the potential for airborne exposure exists.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state: Liquid
- Color: Amber, Translucent
- Odor: Amine, Mercaptan
- Odor threshold: Not available
- pH: Not available
- Vapor pressure: Not available
- Boiling point/range: Not available
- Melting point/range: Not available
- Specific gravity: 1.04
- Vapor density: Not available
- Flash point: > 93 °C (> 199.4 °F) Tagliabue closed cup
- Flammable/Explosive limits - lower: Not available
- Flammable/Explosive limits - upper: Not available
- Autoignition temperature: Not available
- Evaporation rate: Not available
- Solubility in water: Insoluble
- Partition coefficient (n-octanol/water): Not available
- VOC content: 3.77 %; 0.38 g/l EPA Method 24

10. STABILITY AND REACTIVITY

- Stability: Stable
- Hazardous reactions: Will not occur.
- Conditions to avoid: Excessive heat. Store away from incompatible materials.
## 11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly(oxy)(methyl-1,2-ethanediyl), a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>m-Phenylenebis(methylamine)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Phenol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Hazardous components

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly(oxy)(methyl-1,2-ethanediyl), a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop</td>
<td>No Data</td>
</tr>
<tr>
<td>m-Phenylenebis(methylamine)</td>
<td>Irritant, Liver, Kidney, Corrosive</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>Irritant, Allergen</td>
</tr>
<tr>
<td>Phenol</td>
<td>Blood, Cardiac, Corrosive, Developmental, Eyes, Irritant, Kidney, Liver, Mutagen, Nervous System, Skin, Vascular</td>
</tr>
</tbody>
</table>

## 12. ECOLOGICAL INFORMATION

Ecological information: Not available

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal.

**Hazardous waste number:** Not a RCRA hazardous waste.

## 14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

### U.S. Department of Transportation Ground (49 CFR)

- **Proper shipping name:** Amines, liquid, corrosive, n.o.s. (aliphatic Amine)
- **Hazard class or division:** 8
- **Identification number:** UN 2735
- **Packing group:** II

### International Air Transportation (ICAO/IATA)

- **Proper shipping name:** Amines, liquid, corrosive, n.o.s. (aliphatic Amine)
- **Hazard class or division:** 8
- **Identification number:** UN 2735
- **Packing group:** II

### Water Transportation (IMO/IMDG)

- **Proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (aliphatic Amine)
- **Hazard class or division:** 8
- **Identification number:** UN 2735
- **Packing group:** II

## 15. REGULATORY INFORMATION

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus

CERCLA/SARA Section 302 EHS: Phenol (CAS# 108-95-2).
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Phenol (CAS# 108-95-2).

California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: First issue.

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE EXTRA TIME EPOXY - RESIN
Product type: Epoxy resin
Item number: 1405603
Region: United States
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, CT 06067

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

<table>
<thead>
<tr>
<th>Physical state: Liquid</th>
<th>HMIS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color: Translucent, Clear</td>
<td>HEALTH: 2</td>
</tr>
<tr>
<td>Odor: None</td>
<td>FLAMMABILITY: 1</td>
</tr>
<tr>
<td></td>
<td>PHYSICAL HAZARD: 0</td>
</tr>
</tbody>
</table>

WARNING: MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

- **Inhalation:** Mild respiratory tract irritation.
- **Skin contact:** Allergic skin reaction. Moderate skin irritation. Itching. Redness.
- **Eye contact:** Moderate eye irritation. Redness.
- **Ingestion:** Not expected under normal conditions of use.

Existing conditions aggravated by exposure: Skin disorders. Skin allergies.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>25068-38-6</td>
<td>60 - 100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**Inhalation:** Move to fresh air. If symptoms develop and persist, get medical attention.

**Skin contact:** Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention.

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Ingestion:** Keep individual calm. DO NOT induce vomiting unless directed to do so by medical personnel. If symptoms develop and persist, get medical attention.
5. FIRE FIGHTING MEASURES

Flash point: > 249 °C (> 480.2 °F) Pensky Martens closed cup
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Foam, dry chemical or carbon dioxide.
Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards: In case of fire, keep containers cool with water spray. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.
Environmental precautions: Do not allow product to enter sewer or waterways.
Clean-up methods: Remove all sources of ignition. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water. Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling: Do not breathe gas/fumes/vapor/spray. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed.
Storage: Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.
Eye/face protection: Safety goggles or safety glasses with side shields.
Skin protection: Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Translucent, Clear
Odor: None
Odor threshold: Not available
pH: Not applicable
Vapor pressure: 0.03 mm Hg
Boiling point/range: > 260.2 °C (> 500.4 °F)
Melting point/ range: Not available
Specific gravity: 1.17
Vapor density: Not available
Flash point: > 249 °C (> 480.2 °F) Pensky Martens closed cup
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: Not available
Solubility in water: Slight
Partition coefficient (n-octanol/water): Not available
VOC content: 0.1 % (value for resin and hardener together)

**10. STABILITY AND REACTIVITY**

Stability: Stable
Hazardous reactions: Will not occur.
Hazardous decomposition products: None
Conditions to avoid: Excessive heat. Store away from incompatible materials.

**11. TOXICOLOGICAL INFORMATION**

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'‐isopropylidene diphenol resin</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'‐isopropylidene diphenol resin</td>
<td>Allergen, Irritant</td>
</tr>
</tbody>
</table>

**12. ECOLOGICAL INFORMATION**

Ecological information: Not available

**13. DISPOSAL CONSIDERATIONS**

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.
Hazardous waste number: Not a RCRA hazardous waste.

**14. TRANSPORT INFORMATION**

U.S. Department of Transportation Ground (49 CFR)

<table>
<thead>
<tr>
<th>Proper shipping name</th>
<th>Hazard class or division</th>
<th>Identification number</th>
<th>Packing group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not regulated</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrine resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE EXTRA TIME EPOXY-HARDENER
Product type: Epoxy Hardener
Item number: 1405603
Region: United States

Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid
Color: Transparent, Light amber
Odor: Amine

HMIS: HEALTH: *3
        FLAMMABILITY: 1
        PHYSICAL HAZARD: 0

DANGER: CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS.
MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.
HARMFUL IF SWALLOWED, ABSORBED THROUGH SKIN OR INHALED.

Personal Protection: See MSDS Section 8

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects

Inhalation: Harmful if inhaled; may cause delayed lung damage. Respiratory tract burns. May cause lung damage. May cause nose, throat and lung irritation. Inhalation of aerosol may cause irritation to the upper respiratory tract. Can cause severe eye, skin and respiratory tract burns. May cause nose, throat, and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system. May cause central nervous system effects with nausea, dizziness and headache. Severe cases of overexposure can result in respiratory failure. Inhalation of vapors or mists of the product may be irritating to the respiratory system. May cause allergic respiratory reaction.

Skin contact: Harmful in contact with skin. Causes skin burns. May cause central nervous system effects. Headache, nausea, dizziness, confusion, breathing difficulties May cause allergic skin reaction.

Eye contact: Corneal edema may give appearance of "blue haze" or "fog" around lights. Causes eye burns. May cause blindness. Severe eye irritation.

Ingestion: Harmful if swallowed. If ingested, severe burns of the mouth and throat may occur, as well as perforation of the esophagus and the stomach.


This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>C36 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer</td>
<td>68082-29-1</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Amines</td>
<td>Unknown</td>
<td>10 - 30</td>
</tr>
<tr>
<td>4-Tert-butylphenol</td>
<td>98-54-4</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Aliphatic amines</td>
<td>Unknown</td>
<td>10 - 30</td>
</tr>
<tr>
<td>1,2-Ethanediarnine, N-(2-aminoethyl)-, polymer with oxirane</td>
<td>28063-82-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystal-free</td>
<td>112945-52-6</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>112-24-3</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

- **Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- **Skin contact:** Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Thoroughly clean shoes before reuse. If symptoms develop and persist, get medical attention.
- **Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
- **Ingestion:** DO NOT induce vomiting unless directed to do so by medical personnel. Keep individual calm. Get medical attention.

5. FIRE FIGHTING MEASURES

- **Flash point:** 100 °C (212°F) ; Estimated
- **Autoignition temperature:** Not available
- **Flammable/Explosive limits - lower:** Not available
- **Flammable/Explosive limits - upper:** Not available
- **Extinguishing media:** Water spray (fog), foam, dry chemical or carbon dioxide.
- **Special firefighting procedures:** Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
- **Unusual fire or explosion hazards:** In case of fire, keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

- **Environmental precautions:** Do not allow product to enter sewer or waterways.
- **Clean-up methods:** Remove all sources of ignition. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water.
7. HANDLING AND STORAGE

Handling: Keep away from heat, spark and flame. Wash thoroughly after handling. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists of this product. Keep container closed.

Storage: Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>C36 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Amines</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>4-Tert-butylphenol</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Aliphatic amines</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1,2-Ethanediamine, N-(2-aminoethyl)-, polymer with oxirane</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>10 mg/m³ TWA</td>
<td>10 ppm (44 mg/m³) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystal-free</td>
<td>10 mg/m³ TWA</td>
<td>20 MPPCF TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>None</td>
<td>None</td>
<td>1 ppm (6 mg/m³) TWA</td>
<td>(SKIN)</td>
</tr>
</tbody>
</table>

Engineering controls: Use local exhaust ventilation if the potential for airborne exposure exists.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Chemical resistant, impermeable gloves. Neoprene, Butyl-rubber, or nitrile-rubber gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Transparent, Light amber</td>
</tr>
<tr>
<td>Odor:</td>
<td>Amine</td>
</tr>
<tr>
<td>pH:</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point/range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point/ range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>1</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point:</td>
<td>100 °C (212°F) ; Estimated</td>
</tr>
<tr>
<td>Flammable/Explosive limits - lower:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable/Explosive limits - upper:</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature:</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC content:</td>
<td>0.1 g/l (calculated)</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous reactions: Will not occur.
Hazardous decomposition products: None
Conditions to avoid: Excessive heat. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C36 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Amines</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>4-Tert-butylphenol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Aliphatic amines</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>1,2-Ethanediamine, N-(2-aminoethyl)-, polymer with oxirane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystal-free</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Hazardous components Health Effects/Target Organs
C36 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer No Records
Amines No Data
4-Tert-butylphenol Irritant, Allergen, Skin, Corrosive
Aliphatic amines No Data
1,2-Ethanediamine, N-(2-aminoethyl)-, polymer with oxirane No Records
Benzyl alcohol Allergen, Central nervous system, Corrosive, Irritant
Silica, amorphous, fumed, crystal-free Nuisance dust
Triethylenetetramine Allergen, Corrosive, Developmental, Irritant, Mutagen

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.
Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.
Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)
Proper shipping name: Corrosive liquids, n.o.s. (p-tert Butyl phenol)
Hazard class or division: 8
Identification number: UN 1760
Packing group: III
**International Air Transportation (ICAO/IATA)**

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>Corrosive liquid, n.o.s. (p-tert Butyl phenol)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>8</td>
</tr>
<tr>
<td>Identification number:</td>
<td>UN 1760</td>
</tr>
<tr>
<td>Packing group:</td>
<td>III</td>
</tr>
</tbody>
</table>

**Water Transportation (IMO/IMDG)**

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>CORROSIVE LIQUID, N.O.S. (p-tert Butyl phenol)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>8</td>
</tr>
<tr>
<td>Identification number:</td>
<td>UN 1760</td>
</tr>
<tr>
<td>Packing group:</td>
<td>III</td>
</tr>
</tbody>
</table>

**15. REGULATORY INFORMATION**

**United States Regulatory Information**

- **TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act inventory.
- **TSCA 12(b) Export Notification:** None above reporting de minimus
- **CERCLA/SARA Section 302 EHS:** None above reporting de minimus
- **CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health
- **CERCLA/SARA 313:** None above reporting de minimus
- **California Proposition 65:** No California Proposition 65 listed chemicals are known to be present.

**Canada Regulatory Information**

- **CEPA DSL/NDSL Status:** All components are listed on or are exempt from listing on the Domestic Substances List.
- **WHMIS hazard class:** D.2.A, D.2.B, E

**16. OTHER INFORMATION**

This material safety data sheet contains changes from the previous version in sections: First issue.

**Prepared by:** Regulatory Affairs Specialist

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
LOCTITE WELD BONDING COMPOUND

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: LOCTITE WELD BONDING COMPOUND
Product Type: Epoxy adhesive/sealant

2. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESIN</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>25068-38-6</td>
<td>30-60</td>
</tr>
<tr>
<td>Barium sulfate</td>
<td>7727-43-7</td>
<td>10-30</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>10-30</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>1309-38-2</td>
<td>10-30</td>
</tr>
<tr>
<td>SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE</td>
<td>112945-52-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Bisphenol A, formaldehyde, Epichlorohydrin polymer</td>
<td>28906-96-9</td>
<td>1-5</td>
</tr>
<tr>
<td>Clay</td>
<td>1332-58-7</td>
<td>1-5</td>
</tr>
<tr>
<td>Silica, quartz</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td><strong>HARDENER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>30-60</td>
</tr>
<tr>
<td>Polymercaptan</td>
<td>Proprietary</td>
<td>10-30</td>
</tr>
<tr>
<td>Barium sulfate</td>
<td>7727-43-7</td>
<td>10-30</td>
</tr>
<tr>
<td>Aluminum silicate</td>
<td>1327-36-2</td>
<td>5-10</td>
</tr>
<tr>
<td>DIETHYLENETRIAMINE</td>
<td>111-40-0</td>
<td>5-10</td>
</tr>
<tr>
<td>TITANIUM DIOXIDE</td>
<td>13463-67-7</td>
<td>1-5</td>
</tr>
</tbody>
</table>

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium sulfate</td>
<td>10 mg/m3 dust</td>
<td>10 mg/m3 dust</td>
<td>None</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>10 mg/m3 dust</td>
<td>15 mg/m3 dust</td>
<td>None</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>1 mg/M3 (Fe)</td>
<td>10 mg/M3 (Fe)</td>
<td>None</td>
</tr>
<tr>
<td>SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE</td>
<td>6 mg/m3 TWA</td>
<td>10 mg/m3 TWA</td>
<td>3 mg/m3 TWA</td>
</tr>
<tr>
<td>DIETHYLENETRIAMINE</td>
<td>1 ppm skin</td>
<td>1 ppm TWA</td>
<td>None</td>
</tr>
<tr>
<td>TITANIUM DIOXIDE</td>
<td>4.2 mg/m3 skin</td>
<td>4 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Clay</td>
<td>10 mg/m3</td>
<td>15 mg/m3</td>
<td>None</td>
</tr>
<tr>
<td>Silica, quartz</td>
<td>0.05 mg/m3 TWA</td>
<td>0.1 mg/m3 TWA</td>
<td></td>
</tr>
</tbody>
</table>
3. HAZARDS IDENTIFICATION

Toxicity:            Skin and eye irritant. Skin sensitizer. Moderately toxic by ingestion.
Primary Routes of Entry:  Skin, ingestion, inhalation.
Signs and Symptoms of Exposure:  May cause eye irritation and other allergic responses such as skin sensitization or dermatitis
Existing Conditions Aggravated by Exposure:  None known

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Literature Referenced</th>
<th>Target Organ and Other Health Effects</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxy resin</td>
<td>ALG IRR</td>
<td>NO NO NO</td>
<td>NTP IARC OSHA</td>
</tr>
<tr>
<td>Barium sulfate</td>
<td>LUN</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>NUI</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>Iron oxide</td>
<td>ALG CAR CNS IRR KID LIV LUN</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE</td>
<td>NUI</td>
<td>NO N/A NO</td>
<td></td>
</tr>
<tr>
<td>Polymercaptan</td>
<td>No Data</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>Bisphenol A, formaldehyde</td>
<td>ALL IRR</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>Epichlorohydrin polymer</td>
<td>ALG EYE IRR</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>Aluminum silicate</td>
<td>NTO</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>Clay</td>
<td>NUI</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>Silica, quartz</td>
<td>CAR LUN IMM</td>
<td>YES Group1 Yes</td>
<td></td>
</tr>
<tr>
<td>DIETHYLENETRIAMINE</td>
<td>ALG EYE IRR</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>Aluminum Silicate</td>
<td>NTO</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>TITANIUM DIOXIDE</td>
<td>IRR RES</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE</td>
<td>NUI</td>
<td>NO N/A NO</td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations

N/A Not Applicable ALG Allergen
CAR Cardiac CNS Central nervous system
EYE Eyes IRR Irritant
KID Kidney LIV Liver
LUN Lung NTO No Target Organs
NUI Nuisance dust RES Respiratory
IMM Immune system

4. FIRST AID MEASURES

Ingestion:               Do not induce vomiting. Keep individual calm. Obtain medical attention.

Inhalation:              Remove to fresh air. If symptoms persist, obtain medical attention.

Skin Contact:            Wash thoroughly with soap and water.
Eye Contact:             Flush at least 15 minutes with water. Obtain medical attention.
5. FIRE FIGHTING MEASURES

Flash Point: More than 400°F Method: Open cup
Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical
Special Firefighting Procedures: Not available
Unusual Fire or Explosion Hazards: None

Explosive Limits:
(% by volume in air)Lower Not available
(% by volume in air)Upper Not available

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Scrape up as much as possible. Store in closed containers until disposal. Do not store scrap resin with scrap hardener.

7. HANDLING AND STORAGE

Safe Storage: Store in a cool, dry area.
          DO NOT STORE SCRAP RESIN WITH SCRAP HARDENER
Handling: Avoid skin contact. Keep away from eyes.
          Avoid prolonged breathing of vapors.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Rubber or plastic gloves.
Ventilation: Sufficient to maintain vapor concentration below TLV.
Respiratory Not available

See Section 2 for Exposure Limits.
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Resin: Black paste
               Hardener: Beige paste
Odor:        Resin: Mild
               Hardener: Sulfur
Boiling Point: More than 300øF
pH:          Does not apply
Solubility in Water: Insoluble
Specific Gravity Resin: 1.82
               Hardener: 1.75
Volatile Organic Compound 0% (value for resin and hardener together)

Vapor Pressure: Not available
Vapor Density:  Not available
Evaporation Rate (Ether = 1) Not available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: Oxidizing agents.
Conditions to Avoid: Not available
Hazardous Decomposition Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

See Section 3.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Incinerate following EPA and local regulations.
EPA Hazardous Waste Number D005 - May be a TCLP waste per 40CFR 261.24/Barium
14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)
Domestic Ground Transport
Proper Shipping Name: Unrestricted
Hazard Class or Division: Unrestricted
Identification Number: None
Marine Pollutant: None

IATA
Proper Shipping Name: Unrestricted
Class or Division: Unrestricted
UN or ID Number: None

15. REGULATORY INFORMATION

CA Proposition 65: This product contains a chemical known to the State of California to cause cancer.

16. OTHER INFORMATION

Estimated NFPA(R) Code:
Health Hazard: 2
Fire Hazard: 1
Reactivity Hazard: 0
Specific Hazard: Does not apply

Estimated HMIS(R) Code:
Health Hazard: 2
Flammability Hazard: 1
Reactivity Hazards: 0
Personal Protection: See Section 8.

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

16. OTHER INFORMATION

Prepared by: Regulatory Affairs  2/18/08 Rev 3/3/09, 3/18/10
Company: Henkel Consumer Adhesives
Emergency: 1-800-624-9300
(24hr.) Phone: (440) 937-7000
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Gel Epoxy-Resin
Product type: Epoxy resin
Item number: 1405602
Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 800.624.7767
Emergency telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid
Color: Opaque
Odor: Negligible

HMIS:
HEALTH: 2
FLAMMABILITY: 1
PHYSICAL HAZARD: 0

Personal Protection: See MSDS Section 8

WARNING: MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects:

Inhalation: Mild respiratory tract irritation.
Skin contact: Allergic skin reaction. Moderate skin irritation. Itching. Redness.
Eye contact: Moderate eye irritation. Redness.
Ingestion: Not expected under normal conditions of use.

Existing conditions aggravated by exposure: Skin disorders. Skin allergies.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>25068-38-6</td>
<td>60 - 100</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>7631-86-9</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion: Keep individual calm. DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If symptoms develop and persist, get medical attention.

5. FIRE FIGHTING MEASURES

Flash point: 204.44 °C (399.99 °F) ; Estimated
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Foam, dry chemical or carbon dioxide.
Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards: In case of fire, keep containers cool with water spray. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.
Clean-up methods: Remove all sources of ignition. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water. Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling: Do not breathe gas/fumes/vapor/spray. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed.
Storage: Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>6 mg/m³ TWA</td>
<td>20 MPPCF TWA 0.8 mg/m³ TWA</td>
<td>None</td>
<td>3 mg/m³ TWA Respirable fraction.</td>
</tr>
</tbody>
</table>

**Engineering controls:** Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

**Respiratory protection:** Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

**Eye/face protection:** Safety goggles or safety glasses with side shields.
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Opaque
Odor: Negligible
pH: Not available
Vapor pressure: Not available
Boiling point/range: Not available
Melting point/ range: Not available
Specific gravity: 1.02
Vapor density: Not available
Flash point: 204.44 °C (399.99 °F) ; Estimated
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: Not available
Solubility in water: Insoluble
Partition coefficient (n-octanol/water): Not available
VOC content: 0 %; 0 g/l (calculated)

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous reactions: Will not occur.
Hazardous decomposition products: None
Conditions to avoid: Excessive heat. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin-4,4'-isopropylidene diphenol resin</td>
<td>Allergen, Irritant</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>Nuisance dust</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.
Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)
Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrine resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrine resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Bisphenol-A Epichlorhydrine resin
Exceptions: Classified per IMDG Amendment 34; Effective Jan 1, 2010.

15. REGULATORY INFORMATION

United States Regulatory Information
TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information
CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: First issue.

Prepared by: Regulatory Affairs Specialist
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Gel Epoxy- Hardener
Product type: Epoxy Hardener
Item number: 1405602
Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 800.624.7767
Emergency telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS: Physical state: Liquid, Gel
Color: Translucent, Amber
Odor: Mercaptan

HEALTH: *3
FLAMMABILITY: 1
PHYSICAL HAZARD: 0

DANGER:
CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS.
MAY CAUSE ALLERGIC SKIN REACTION.
MAY BE HARMFUL IF SWALLOWED OR INHALED.

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects

Inhalation: Respiratory tract burns. May cause respiratory tract irritation. May cause irritation to nose and throat. May be harmful if inhaled.

Skin contact: May cause skin burns. May cause allergic skin reaction. Rash. Redness.

Eye contact: Burns. Severe eye irritation. Redness. Tissue damage. Tearing. Pain and discomfort. Corneal edema may give appearance of “blue haze” or “fog” around lights.

Ingestion: May be harmful if swallowed. May cause burns of mouth and throat if swallowed. May cause an aspiration hazard if swallowed. Aspirated material can enter the lungs and result in pneumonitis.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders. Skin allergies.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptob</td>
<td>72244-98-5</td>
<td>60 - 100</td>
</tr>
<tr>
<td>Aliphatic amines</td>
<td>Unknown</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>7631-86-9</td>
<td>5 - 10</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>90-72-2</td>
<td>5 - 10</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Thoroughly clean shoes before reuse. If symptoms develop and persist, get medical attention.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Keep individual calm. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point: > 93 °C (> 199.4 °F) Tagliabue closed cup

Autoignition temperature: Not available

Flammable/Explosive limits - lower: Not available

Flammable/Explosive limits - upper: Not available

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: In case of fire, keep containers cool with water spray.


6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods: Remove all sources of ignition. Immediately contact emergency personnel. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling: Do not taste or swallow. Avoid contact with eyes, skin and clothing. Do not breathe gas/fumes/vapor/spray. Keep container closed. Wash thoroughly after handling.

Storage: Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.
<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Aliphatic amines</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>6 mg/m³ TWA</td>
<td>20 MPPCF TWA</td>
<td>0.8 mg/m³ TWA</td>
<td>None</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**Engineering controls:**
Use local exhaust ventilation if the potential for airborne exposure exists.

**Respiratory protection:**
Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

**Eye/face protection:**
Safety goggles or safety glasses with side shields.

**Skin protection:**
Chemical resistant, impermeable gloves.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Physical state:** Liquid, Gel
- **Color:** Translucent, Amber
- **Odor:** Mercaptan
- **Odor threshold:** Not available
- **pH:** Not available
- **Vapor pressure:** Not available
- **Boiling point/range:** Not available
- **Melting point/ range:** Not available
- **Specific gravity:** 1.04
- **Vapor density:** Not available
- **Flash point:** > 93 °C (> 199.4 °F) Tagliabue closed cup
- **Flammable/Explosive limits - lower:** Not available
- **Flammable/Explosive limits - upper:** Not available
- **Autoignition temperature:** Not available
- **Evaporation rate:** Not available
- **Solubility in water:** Insoluble
- **Partition coefficient (n-octanol/water):** Not available
- **VOC content:** 0.11 %; 1.13 g/l EPA Method 24

### 10. STABILITY AND REACTIVITY

- **Stability:** Stable
- **Hazardous reactions:** Will not occur.
- **Hazardous decomposition products:** Oxides of carbon. Oxides of nitrogen. Irritating organic fragments.
- **Conditions to avoid:** Store away from incompatible materials.

### 11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Aliphatic amines</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2,4,6-Tris(dimethylaminomethyl)phenol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

IDH number: 1405602

Product name: Loctite Gel Epoxy- Hardener

Page 3 of 5
Hazardous components | Health Effects/Target Organs
---|---
Poly[oxymethyl-1,2-ethanediyl], a-hydro-w-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop | No Data
Aliphatic amines | No Data
Silicon dioxide | Nuisance dust
2,4,6-Tris(dimethylaminomethyl)phenol | Irritant, Allergen

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

**U.S. Department of Transportation Ground (49 CFR)**
- Proper shipping name: Amines, liquid, corrosive, n.o.s. (aliphatic Amine)
- Hazard class or division: 8
- Identification number: UN 2735
- Packing group: II

**International Air Transportation (ICAO/IATA)**
- Proper shipping name: Amines, liquid, corrosive, n.o.s. (aliphatic Amine)
- Hazard class or division: 8
- Identification number: UN 2735
- Packing group: II

**Water Transportation (IMO/IMDG)**
- Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (aliphatic Amine)
- Hazard class or division: 8
- Identification number: UN 2735
- Packing group: II

15. REGULATORY INFORMATION

**United States Regulatory Information**

- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12(b) Export Notification: None above reporting de minimus
- CERCLA/SARA Section 302 EHS: None above reporting de minimus
- CERCLA/SARA Section 311/312: Immediate Health
- CERCLA/SARA 313: None above reporting de minimus
- California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

**Canada Regulatory Information**

- CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
- WHMIS hazard class: D.2.B, E
16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: First issue.

Prepared by: Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation’s products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation’s products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Epoxy Putty
IDH number: 431348, 1050317
Product Type: Epoxy Putty

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycidyl ethers of bisphenol A resins</td>
<td>25068-38-6</td>
<td>5-10</td>
</tr>
<tr>
<td>Zinc sulfide</td>
<td>1314-98-3</td>
<td>3-7</td>
</tr>
<tr>
<td>Diglycidyl ethers of bisphenol A resins</td>
<td>028064-14-4</td>
<td>1-5</td>
</tr>
<tr>
<td>Polymeric phenolic amine</td>
<td>32610-77-8</td>
<td>1-5</td>
</tr>
<tr>
<td>Tri (dimethylaminomethyl) Phenol</td>
<td>90-72-2</td>
<td>0.1-1.0</td>
</tr>
</tbody>
</table>

*** All ingredients in this product are listed in the T.S.C.A. inventory. Refer to Section 8 for occupational exposure limits.

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

PHYSICAL STATE: Putty  COLOR: Green/White  ODOR: Amine. Fishy
Solubility (in water): Insoluble in water  Vapor Density: Non Volatile
% Volatile Weight: 0 %  % Volatile: < 1.0%  VOC: < 1.0%  Specific Gravity: 1.9

Note: The physical data represented above are typical values and should not be construed as a specification. For additional physical data, and details on use, please obtain a technical data sheet for this product.

Potential Health Effects

Eye:
   Irritant and possible sensitizer.

Skin:
   Irritant and possible sensitizer.

Ingestion:
   Irritation of intestinal tract.

Inhalation:
   Not expected to be to be harmful if inhaled.

Conditions Aggravated by Exposure:
   None known

Chronic:
   None known
Product name: Epoxy Putty
IDH number: 431348, 1050317
Product Type: Epoxy Putty

4. FIRST AID MEASURES

Eye:
Immediately flush eyes with plenty of water for at least 15 minutes.
Get medical attention.

Skin:
Immediately flush skin with plenty of water (using soap, if available).

Ingestion:
Seek medical advice.

Inhalation:
Remove to fresh air. If symptoms develop and persist, get medical attention.

Note to Physician:
None.

5. FIRE FIGHTING MEASURES

Flash Point:
Not Applicable

Extinguishing Media:
In case of fire, use water spray (fog), foam, dry chemicals, or CO2.

Flammable Limits:
Not available.

Special Fire Fighting Procedures:
Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Hazardous Combustion Products:

Unusual Fire or Explosion Hazards:
None.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak:
Scrape up material and dispose of in accordance with federal, state and local regulations.
7. HANDLING AND STORAGE

Handling:
Storage Temperature: < 90F (32C)
Storage Conditions: Store in cool, dry, well ventilated area.

Transfer: No special precautions are needed. Follow good manufacturing and handling practices.

Personal Hygiene: Wash thoroughly after handling, especially before eating, drinking, smoking, and using restroom facilities. Wash contaminated goggles, faceshield, and gloves. Professionally launder contaminated clothing before re-use.

Empty container precautions: Attention! This container can be hazardous when empty. Follow label cautions even after the container is empty since empty containers can contain product residues. Do not re-use empty containers for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH TLV</th>
<th>ACGIH TLV-C</th>
<th>ACGIH STEL</th>
<th>OSHA STEL</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycidyl ethers of bisphenol A resins</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
</tr>
<tr>
<td>Zinc sulfide</td>
<td>5.00 mg/M3</td>
<td>N/est</td>
<td>N/est</td>
<td>5.00 mg/M3</td>
<td></td>
</tr>
<tr>
<td>Diglycidyl ethers of bisphenol A resins</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td></td>
</tr>
<tr>
<td>Polymeric phenolic amine</td>
<td>N/est</td>
<td>N/est</td>
<td>5.00 PPM</td>
<td>5.0 PPM</td>
<td></td>
</tr>
<tr>
<td>Tri (dimethylaminomethyl) phenol</td>
<td>5.00 PPM</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td></td>
</tr>
</tbody>
</table>

Engineering Controls:
Not normally needed. General room ventilation is usually adequate. Use local ventilation if heated above 100oF (38oC).

Eye/Face Protection:
Safety glasses or goggles

Skin Protection:
Appropriate impervious gloves. Because a variety of protective gloves exist, consult glove manufacturer to determine the proper type for a specific operation.

Respiratory Protection:
General Mechanical: None required. Local Exhaust: Only if heated above 100F
9. PHYSICAL AND CHEMICAL PROPERTIES

Color: Green exterior; white interior
Material State: Putty
Odor: Amine. Fishy
Boiling point: Not applicable.
PH: Not applicable.
Solubility in Water: Insoluble
Specific gravity: 1.9
VOC: <1.0%
Vapor Pressure: Not available.
Vapor density: Non Volatile.
Evaporation Rate: Not Volatile.

10. STABILITY AND REACTIVITY

Stability:
Stable.
Conditions to Avoid:
None known
Incompatibility:
None known
Hazardous Polymerization:
Will not occur.
Hazardous Decomposition Products:
Aldehydes, acids, and oxides of carbon, nitrogen, and sulfur.

11. TOXICOLOGY INFORMATION

Product Toxicology Data:
Not available.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium aluminum borosilicate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Zinc sulfide</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Key to abbreviations:
IARC N/A - Not applicable.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Health Effects/Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium aluminum borosilicate</td>
<td>Allergen. Respiratory.</td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>Allergen. Irritant.</td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>Allergen. Irritant.</td>
</tr>
</tbody>
</table>
Product name: Epoxy Putty
IDH number: 431348, 1050317
Product Type: Epoxy Putty

Zinc sulfide
Blood. Immune system. Irritant.
Respiratory.

Polymeric phenolic amine
No Records.

12. ECOLOGICAL INFORMATION

Ecological Information:
None known

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal:
Dispose according to EPA and local governmental regulations.
EPA Hazardous Waste Number:
Not applicable.

14. TRANSPORTATION INFORMATION

Domestic Transportation (D.O.T. 49 CFR)-GROUND

Shipping Description:
Not regulated
Exceptions:
Not applicable.

International Air Transportation (ICAO/IATA)-
Shipping description:
Not regulated.
Exceptions:
Not applicable.

International Maritime Dangerous Goods (IMDG)-
Marine pollutant:
None known

15. REGULATORY INFORMATION

SARA Title III Section 313 Chemicals:
Zinc sulfide
SARA Title III Section 311/312:
Immediate health hazard
Toxic Substances Control Act:
All components are listed on or are exempt from listing on the Toxic
Substances Control Act Inventory.
TSCA Section 12(b) annual: None.
MATERIAL SAFETY DATA SHEET

Product name: Epoxy Putty
IDH number: 431348, 1050317
Product Type: Epoxy Putty

TSCA Section 12(b) one time:
None.

Canadian Inventory Status:
All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

California Proposition 65:
This product contains no chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm.

16. OTHER INFORMATION

NFPA Code:

  Health: 3
  Flammability: 1
  Reactivity: 1
  Special: None

HENKEL CONSUMER ADHESIVES
(24hr.) Phone: (440) 937-7000
Loctite Threadlocker Blue 209728

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Loctite Threadlocker Blue 242
Item No.: 209728
Product Type: Anaerobic

2. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyglycol dimethacrylate</td>
<td>25852-47-5</td>
<td>60-100</td>
</tr>
<tr>
<td>Polyglycol oleate</td>
<td>9004-96-0</td>
<td>10-30</td>
</tr>
<tr>
<td>SACCHARIN</td>
<td>81-07-2</td>
<td>1-5</td>
</tr>
<tr>
<td>CUMENE HYDROPEROXIDE*</td>
<td>80-15-9</td>
<td>1-5</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>1-5</td>
</tr>
<tr>
<td>SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE</td>
<td>112945-52-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td></td>
</tr>
</tbody>
</table>

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUMENE HYDROPEROXIDE</td>
<td></td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE</td>
<td>10 mg/m3 TWA</td>
<td>6 mg/m3 TWA</td>
<td>3 ppm (6 mg/m3) Skin (WEEL)</td>
</tr>
</tbody>
</table>

Exposure Limits (STEL)

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
</tr>
</thead>
</table>

3. HAZARDS IDENTIFICATION

Toxicity: Mild eye irritant. Propylene glycol is a mild skin irritant.
Primary Routes of Entry: Eye, skin contact.
Signs and Symptoms of Exposure: May cause dermatitis on prolonged contact in sensitive individuals.
3. HAZARDS IDENTIFICATION

Existing Conditions
Aggravated by Exposure: Propylene glycol: dermatitis.

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Target Organ and Other Health Effects</th>
<th>Literature Referenced</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyglycol dimethacrylate</td>
<td>ALG IRR</td>
<td></td>
<td>NO NO NO</td>
</tr>
<tr>
<td>Polyglycol oleate</td>
<td>IRR</td>
<td></td>
<td>NO NO NO</td>
</tr>
<tr>
<td>SACCHARIN</td>
<td>NTO</td>
<td></td>
<td>NO 2B NO</td>
</tr>
<tr>
<td>CUMENE HYDROPEROXIDE</td>
<td>ALG CNS COR IRR MUT</td>
<td></td>
<td>NO NO NO</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>IRR</td>
<td></td>
<td>NO NO NO</td>
</tr>
<tr>
<td>SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE</td>
<td>NUI</td>
<td></td>
<td>NO N/A NO</td>
</tr>
</tbody>
</table>

Abbreviations

N/A Not Applicable 2B Possibly carcinogenic to humans
ALG Allergen CNS Central nervous system
COR Corrosive IRR Irritant
MUT Mutagen NTO No Target Organs
NUI Nuisance dust RES Respiratory

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Keep individual calm. Obtain medical attention.
Inhalation: May cause respiratory tract irritation.
Skin Contact: May cause allergic skin reaction. May cause skin irritation.
Eye Contact: Wash thoroughly with soap and water. Flush at least 15 minutes with water. Obtain medical attention.

5. FIRE FIGHTING MEASURES

Flash Point: More than 200°F Method: Tag Closed Cup
Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical.
Special Firefighting Procedures: Not available
Hazardous Products formed by Fire or Thermal Decomp Irritating organic vapors; oxides of carbon.
Unusual Fire or Explosion Hazards: None
5. FIRE FIGHTING MEASURES (continued)

Explosive Limits:
(% by volume in air)Lower Propylene glycol: 2.6%
(% by volume in air)Upper Propylene glycol: 12.5%

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak:
Soak up in an inert absorbent. Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Safe Storage: Store below 100øF

Handling: Avoid prolonged skin contact. Keep away from eyes.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Neoprene, rubber, or butyl rubber gloves.
Ventilation: Does not apply
Respiratory Not available

See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Blue liquid
Odor: Mild
Boiling Point: More than 300øF
pH: Does not apply
Solubility in Water: Slight
Specific Gravity 1.1 at 75øF
Volatile Organic Compound (EPA Method 24) 4.48%; 49.3 grams per liter
Vapor Pressure: Less than 5 mm at 80øF
Vapor Density: Not available
Evaporation Rate (Ether = 1) Not available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: Strong oxidizers, free radical initiators, inert gases.
Conditions to Avoid: Not available
10. STABILITY AND REACTIVITY (continued)

Hazardous Decomposition
Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

Oral LD50 more than 10000 mg/kg.
Dermal LD50 more than 5000 mg/kg.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Incinerate following EPA and local regulations.
EPA Hazardous Waste Number NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)
Domestic Ground Transport
Proper Shipping Name: Not Regulated
Hazard Class or Division: Not Regulated
Identification Number: None
Marine Pollutant: None
IATA
Proper Shipping Name: Not Regulated
Class or Division: Not Regulated
UN or ID Number: None

15. REGULATORY INFORMATION

CA Proposition 65: This product contains Saccharin. No prop65 hazard warning is necessary if this product is used as reasonably anticipated.

16. OTHER INFORMATION

Estimated NFPA(R) Code:
Health Hazard: 2
Fire Hazard: 1
Reactivity Hazard: 1
Specific Hazard: Does not apply

Estimated HMIS(R) Code:
16. OTHER INFORMATION (continued)

Health Hazard: 1*
Flammability Hazard: 1
Reactivity Hazards: 1
Personal Protection: See Section 8.

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared by:
Company: Regulatory Affairs - 1/31/05 Rev 3/3/09
Henkel Consumer Adhesives, 32150 Just Imagine Dr, Avon OH 44011
(24hr.) Phone: (440) 937-7000
Spill: Chemtrec 1-800-424-9300
290 THREADLOCKER 6ML TB/CG

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: 290 THREADLOCKER 6ML TB/CG
IDH: 233722
Product Type: Anaerobic

2. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyglycol dimethacrylate</td>
<td>25852-47-5</td>
<td>90-95</td>
</tr>
<tr>
<td>CUMENE HYDROPEROXIDE*</td>
<td>80-15-9</td>
<td>3-5</td>
</tr>
<tr>
<td>SACCHARIN</td>
<td>81-07-2</td>
<td>1-3</td>
</tr>
<tr>
<td>N,N-Dialkyltoluidines</td>
<td>613-48-9</td>
<td>0.1-1</td>
</tr>
</tbody>
</table>

* This component is listed as a SARA Section 313 Toxic Chemical.

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyglycol dimethacrylate</td>
<td>25852-47-5</td>
<td>90-95</td>
</tr>
<tr>
<td>CUMENE HYDROPEROXIDE*</td>
<td>80-15-9</td>
<td>3-5</td>
</tr>
<tr>
<td>SACCHARIN</td>
<td>81-07-2</td>
<td>1-3</td>
</tr>
<tr>
<td>N,N-Dialkyltoluidines</td>
<td>613-48-9</td>
<td>0.1-1</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Toxicity: Estimated oral LD50 more than 10000 mg/kg. Estimated dermal LD50 more than 5000 mg/kg.

Primary Routes of Entry: None known

Signs and Symptoms of Exposure: May cause dermatitis on prolonged contact in sensitive individuals.

Existing Conditions Aggravated by Exposure: None known

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Literature Referenced</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target Organ and Other Health Effects</td>
<td>NTP IARC OSHA</td>
</tr>
</tbody>
</table>

Polyglycol dimethacrylate ALG IRR NO NO NO
CUMENE HYDROPEROXIDE ALG CNS COR IRR MUT NO NO NO
SACCHARIN NTO NO 2B NO
N,N-Dialkyltoluidines NTO NO NO NO
3. HAZARDS IDENTIFICATION (continued)

Abbreviations

2B  Possibly carcinogenic to humans     ALG  Allergen
CNS  Central nervous system              COR  Corrosive
IRR  Irritant                            MUT  Mutagen
NTO  No Target Organs

4. FIRST AID MEASURES

Ingestion:  
Do not induce vomiting.  Keep individual calm.
Obtain medical attention.

Inhalation:  
Remove to fresh air.  If symptoms persist, obtain medical attention.

Skin Contact:  
Wash with soap and water.

Eye Contact:  
Flush at least 15 minutes with water.

5. FIRE FIGHTING MEASURES

Flash Point:  
More than 200øF        Method:  Tag Closed Cup

Recommended
Extinguishing Agents:  
Carbon dioxide, foam, dry chemical

Special Firefighting Procedures:  
Not available

Hazardous Products formed by Fire or Thermal Decomp:  
Irritating organic vapors

Unusual Fire or Explosion Hazards:  
None

Explosive Limits:
(% by volume in air)Lower  Not available
(% by volume in air)Upper  Not available

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak:  
Soak up with an inert absorbent.  Store in partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Safe Storage:  
Store below 100øF
(Contact Loctite Customer Service 1-800-243-4874 for shelf life information)

Handling:  
Avoid prolonged skin contact. Keep away from eyes.
8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Neoprene, rubber, or butyl rubber gloves.
Ventilation: Use adequate ventilation.
Respiratory Not available

See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Green liquid
Odor: Mild
Boiling Point: More than 300øF
pH: Does not apply
Solubility in Water: Slight
Specific Gravity 1.07 at 80øF
Volatile Organic Compound (EPA Method 24) 12.6%; 135 grams per liter
Vapor Pressure: Less than 5mm at 80øF
Vapor Density: Not available
Evaporation Rate (Ether = 1) Not available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: None
Conditions to Avoid: Not available
Hazardous Decomposition Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

See Section 3.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Incinerate following EPA and local regulations.
EPA Hazardous Waste Number NH - Not a RCRA Hazardous Waste Material
Product Name: 290 THREADLOCKER 6ML TB/CG  
IDH: 233722

14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)
Domestic Ground Transport
Proper Shipping Name: Unrestricted
Hazard Class or Division: Unrestricted
Identification Number: None
Marine Pollutant: None

IATA
Proper Shipping Name: Unrestricted
Class or Division: Unrestricted
UN or ID Number: None

15. REGULATORY INFORMATION

CA Proposition 65: WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (ppb levels of Arsenic, Cd, Pb, Ni),

This product contains Saccharin. No Prop65 hazard warning is necessary if this product is used as reasonably anticipated.

16. OTHER INFORMATION

Estimated NFPA(R) Code:
Health Hazard: 1
Fire Hazard: 1
Reactivity Hazard: 1
Specific Hazard: Does not apply

Estimated HMIS(R) Code:
Health Hazard: 1
flammability Hazard: 1
Reactivity Hazards: 1
Personal Protection: See Section 8.

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared by: Safety, Health and Regulatory Affairs - North America,
Loctite Corp., 1001 Tr Br Cr, Rocky Hill CT 06067
(24hr.) Phone: (860) 571-5100
Loctite Threadlocker Red 271

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Loctite Threadlocker Red 271**  
ID#: 209741  
Product Type: Anaerobic

2. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyglycol dimethacrylate</td>
<td>25852-47-5</td>
<td>60-100</td>
</tr>
<tr>
<td>Bisphenol A fumarate resin</td>
<td>39382-25-7</td>
<td>10-30</td>
</tr>
<tr>
<td>Saccharin</td>
<td>81-07-2</td>
<td>1-5</td>
</tr>
<tr>
<td>CUMENE HYDROPEROXIDE*</td>
<td>80-15-9</td>
<td>1-5</td>
</tr>
</tbody>
</table>

* This component is listed as a SARA Section 313 Toxic Chemical.

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Exposure Limits (TWA) Ingredients</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUMENE HYDROPEROXIDE</td>
<td>None</td>
<td>None</td>
<td>1ppm (6mg/m3)</td>
</tr>
</tbody>
</table>

Skin (WEEL)

<table>
<thead>
<tr>
<th>Exposure Limits (STEL) Ingredients</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
</tr>
</thead>
</table>

3. HAZARDS IDENTIFICATION

Toxicity:  
Eye irritant.  
Inhalation irritant to respiratory tract.  
Estimated oral LD50 more than 5000mg/kg  
Estimated dermal LD50 more than 2000mg/kg

Primary Routes of Entry: None known

Signs and Symptoms of Exposure: May cause dermatitis on prolonged contact in sensitive individuals.

Existing Conditions Aggravated by Exposure: None known
3. HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Literature Referenced</th>
<th>Target Organ and Other Health Effects</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyglycol dimethacrylate</td>
<td>ALG IRR</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>Bisphenol A fumarate resin</td>
<td>ALG IRR</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>Saccharin</td>
<td>NTO</td>
<td>NO N/A NO</td>
<td></td>
</tr>
<tr>
<td>CUMENE HYDROPEROXIDE</td>
<td>ALG CNS COR IRR MUT</td>
<td>NO NO NO</td>
<td></td>
</tr>
<tr>
<td>N,N-Dialkyltoluidines</td>
<td>NTO</td>
<td>NO NO NO</td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations

- N/A Not Applicable
- ALG Allergen
- CNS Central nervous system
- COR Corrosive
- IRR Irritant
- MUT Mutagen
- NTO No Target Organs

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Keep individual calm. Obtain medical attention.

Inhalation: Remove to fresh air. If symptoms develop, seek medical attention.

Skin Contact: **Remove contaminated clothing and footwear.** Flush with water.

Eye Contact: Flush at least 15 minutes with water holding eyelids open. Obtain medical attention.

5. FIRE FIGHTING MEASURES

Flash Point: More than 200°F

Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical

Special Firefighting Procedures: Not available

Hazardous Products formed by Fire or Thermal Decomposition: Irritating organic vapors

Unusual Fire or Explosion Hazards: None

Explosive Limits:

(% by volume in air)Lower: Not available
(% by volume in air)Upper: Not available
6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Soak up in an inert absorbent. Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Safe Storage: Store below 100 deg. F
Handling: Avoid contact with eyes, skin, and clothing. Avoid breathing vapor and mist.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Neoprene, rubber, or butyl rubber gloves.
Ventilation: Does not apply
Respiratory Use NIOSH approved respirator if there is potential to exceed exposure limits.

See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Red liquid
Odor: Mild
Boiling Point: More than 300°F
pH: Does not apply
Solubility in Water: Slight
Specific Gravity 1.10 at 80°F
Volatile Organic Compound (EPA Method 24) 0.8177%; 7.8053 g/l
Vapor Pressure: Less than 5mm at 80°F
Vapor Density: Not available
Evaporation Rate (Ether = 1) Not available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Conditions to Avoid: Not available
11. TOXICOLOGICAL INFORMATION

See Section 3.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Dispose of according to federal, state, and local government regulations.

EPA Hazardous Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)
Domestic Ground Transport
Proper Shipping Name: Not Regulated
Hazard Class or Division: Not Regulated
Identification Number: None
Marine Pollutant: None

IATA
Proper Shipping Name: Not Regulated
Class or Division: Not Regulated
UN or ID Number: None

15. REGULATORY INFORMATION

CA Proposition 65: This product contains a chemical known to the state of California to cause cancer.

16. OTHER INFORMATION

Estimated NFPA(R) Code:
Health Hazard: 1
Fire Hazard: 1
Reactivity Hazard: 1
Specific Hazard: Does not apply

Estimated HMIS(R) Code:
Health Hazard: 1
Flammability Hazard: 1
Reactivity Hazards: 1
Personal Protection: See Section 8.
1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name:</th>
<th>Loctite PL Premium Advanced Polyurethane Adhesive</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDH number:</td>
<td>1417170</td>
</tr>
<tr>
<td>Product type:</td>
<td>1-component-polyurethane adhesive</td>
</tr>
<tr>
<td>Region:</td>
<td>United States</td>
</tr>
<tr>
<td>Company address:</td>
<td>Henkel Corporation 32150 Just Imagine Drive Avon, Ohio 44011</td>
</tr>
<tr>
<td>Contact information:</td>
<td>Telephone: 800.624.7767 Emergency telephone: 800.424.9300</td>
</tr>
</tbody>
</table>

2. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**

<table>
<thead>
<tr>
<th>HMIS:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH:</td>
<td>*2</td>
</tr>
<tr>
<td>FLAMMABILITY:</td>
<td>1</td>
</tr>
<tr>
<td>PHYSICAL HAZARD:</td>
<td>1</td>
</tr>
<tr>
<td>Personal Protection:</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**WARNING:**
MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.
CAUSES SKIN IRRITATION
CAUSES RESPIRATORY TRACT IRRITATION.
This product may be severely irritating to the eyes.
CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

**Relevant routes of exposure:** Eyes, Ingestion, Inhalation, Skin

**Potential Health Effects**

**Inhalation:**
Contains crystalline silica (quartz), which is classified as a possible carcinogen. However, the crystalline silica present in this product is encapsulated in the liquid and will only be liberated if the product is sanded or abraded, and even then what is liberated will not be pure crystalline silica. Appropriate precautions, however, should be taken if the product is sanded or abraded to prevent personnel from breathing the dust. May cause sensitization by inhalation and skin contact. Moderate respiratory tract irritation. Exposure to diisocyanates may cause the following human health effects: Skin irritation and allergic reactions, respiratory irritation, respiratory sensitization and lung toxicity; some diisocyanates also may cause cancer. The likelihood that these effects will occur depends on a number of factors; among them the level of exposure, frequency of exposure, part of body exposed and sensitivity of the exposed individual. Persons suffering from allergic reactions to isocyanates should avoid contact with the product.

**Skin contact:**
Contact with skin can cause irritation and allergic reaction (sensitization) in some individuals. This product may discolor the skin.

**Eye contact:**
Causes eye irritation.

**Ingestion:**
Do not taste or swallow.

**Existing conditions aggravated by exposure:**
Pre-existing skin or lung allergies may increase the chance of developing exaggerated allergic symptoms from exposure to this product.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylenebis(phenylisocyanate)</td>
<td>101-68-8</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Diphenylmethane-diisocyanate, isomers and homologues</td>
<td>9016-87-9</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Methylene bisphenyl isocyanate</td>
<td>26447-40-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>1305-78-8</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

Skin contact: Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention. Remove contaminated clothes.

Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion: Do not induce vomiting, seek medical advice immediately.

Notes to physician: There is no specific antidote. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate. The physician's judgment should be used to control symptoms and clinical condition based on the individual reactions of the patient.

5. FIRE FIGHTING MEASURES

Flash point: not applicable

Autoignition temperature: Not available

Flammable/Explosive limits - lower: Not available

Flammable/Explosive limits - upper: Not available

Extinguishing media: Not available

Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: Fumes and vapors from thermal decompositions vary in composition and toxicity.

Hazardous combustion products: Not available

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not empty into drains / surface water / ground water.

Clean-up methods: Ensure adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection.
7. HANDLING AND STORAGE

Handling: Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Avoid extreme temperatures. Use only with adequate ventilation. See advice in chapter 8.

Storage: For safe storage, store at or above 20 °C (68°F). Below temperature limit the product properties will change. Keep container closed. Keep in a cool, well ventilated area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylenebis(phenylisocyanate)</td>
<td>0.005 ppm TWA</td>
<td>0.02 ppm (0.2 mg/m3) Ceiling1</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Diphenylmethane-diisocyanate, isomers and homologues</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Methylene bisphenyl isocyanate</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>2 mg/m3 TWA</td>
<td>5 mg/m3 TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable.</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>0.1 mg/m3 TWA Respirable.</td>
<td>0.3 mg/m3 TWA Total dust.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10 mg/m3 TWA</td>
<td>15 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection: In such cases, or whenever concentrations of MDI exceed the TLV, respiratory protection must be worn. If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH.

Eye/face protection: Safety glasses with side-shields.

Skin protection: Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical state: | Viscous |
| Color: | Grey |
| Odor: | Aromatic, Mild |
| Odor threshold: | Not available |
| pH: | Not applicable |
| Vapor pressure: | Not available |
| Boiling point/range: | Not available |
| Melting point/ range: | Not available |
| Specific gravity: | 1.3000 at 23.89 °C (75°F) Approximately |
| Vapor density: | Not available |
| Flash point: | Not applicable |
| Flammable/Explosive limits - lower: | Not available |
| Flammable/Explosive limits - upper: | Not available |
| Autoignition temperature: | Not available |
| Evaporation rate: | Not available |
| Solubility in water: | Insoluble in water |
| Partition coefficient (n-octanol/water): | Not available |
10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: Will not occur.


Conditions to avoid: Moisture.

11. TOXICOLOGICAL INFORMATION

Acute dermal product toxicity: May cause sensitization by skin contact.

Acute inhalation product toxicity: May cause sensitization by inhalation, irritating to respiratory system

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylenebis(phenylisocyanate)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Diphenylmethane-diisocyanate, isomers and homologues</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Methylene bisphenyl isocyanate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylenebis(phenylisocyanate)</td>
<td>Irritant, Respiratory, Allergen</td>
</tr>
<tr>
<td>Diphenylmethane-diisocyanate, isomers and homologues</td>
<td>Allergen, Irritant, Kidney, Liver, Respiratory</td>
</tr>
<tr>
<td>Methylene bisphenyl isocyanate</td>
<td>Allergen, Irritant, Mutagen, Respiratory</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>Irritant, Corrosive, Eyes</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Irritant, Respiratory, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Recommended method of disposal: Information provided is for unused product only.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>None</td>
</tr>
<tr>
<td>Identification number:</td>
<td>None</td>
</tr>
<tr>
<td>Packing group:</td>
<td>None</td>
</tr>
</tbody>
</table>
International Air Transportation (ICAO/IATA)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Hazard class or division</td>
<td>None</td>
</tr>
<tr>
<td>Identification number</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
</tbody>
</table>

Water Transportation (IMO/IMDG)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Hazard class or division</td>
<td>None</td>
</tr>
<tr>
<td>Identification number</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12(b) Export Notification: None above reporting de minimus

CERCLA/SARA Section 302 EHS: None above reporting de minimus

CERCLA/SARA Section 311/312: Acute; chronic

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372): Methylenebis(phenylisocyanate) (CAS# 101-68-8). Diphenylmethane-diisocyanate, isomers and homologues (CAS# 9016-87-9).

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

WHMIS hazard class: None necessary.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: Not available

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL Paneling and Trim Adhesive  
IDH number: 1402262
Product type: Water based adhesive
Company address: Henkel Corporation  
One Henkel Way  
Rocky Hill, Connecticut 06067
Region: United States
Contact information:  
Telephone: 800.624.7767  
Transportation Emergency Telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

<table>
<thead>
<tr>
<th>HMIS:</th>
<th>HEALTH:</th>
<th>FLAMMABILITY:</th>
<th>PHYSICAL HAZARD:</th>
<th>Personal Protection:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state: pasty</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>See MSDS Section 8</td>
</tr>
<tr>
<td>Color: white</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor: Mild, acrylic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CAUTION: MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects

Inhalation: May cause irritation to nose and throat. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release.

Skin contact: May cause slight irritation to skin.

Eye contact: May cause slight irritation to eyes on contact.

Ingestion: Not expected to be harmful by ingestion. Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Existing conditions aggravated by exposure: None known

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbon Oil</td>
<td>68527-25-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air in case of accidental inhalation of vapours.

Skin contact: Wash affected area immediately with soap and water.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. If symptoms develop and persist, get medical attention.
Ingestion: Consult a physician if necessary.

5. FIRE FIGHTING MEASURES

Flash point: No flashpoint. Aqueous preparation.
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Carbon dioxide, foam, powder Water fog.
Special firefighting procedures: Use water spray to keep fire exposed containers cool and disperse vapors.
Unusual fire or explosion hazards: Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.
Environmental precautions: Not available
Clean-up methods: Absorb spill with inert material. Shovel material into appropriate container for disposal.

7. HANDLING AND STORAGE

Handling: Avoid prolonged or repeated skin contact with this material. Keep out of the reach of children.
Storage: For safe storage, store at or above 0 °C (32°F) Keep from freezing. Store in a cool, dry area. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbon Oil</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>100 mg/m3 Ceiling1 Aerosol.</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Eye/face protection: Safety goggles or safety glasses with side shields.
Skin protection: Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: pasty
Color: white
Odor: Mild, acrylic
Odor threshold: Not available
pH: 7.0 - 7.5
Vapor pressure: 15.000000 mm hg (20.0 °C (68°F))
Boiling point/range: 100 °C (212°F)
Melting point/ range: Not available
Specific gravity: 1.4410
Vapor density: Heavier than air
Flash point: No flashpoint. Aqueous preparation.
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: < 1 (Butyl acetate = 1)
Solubility in water: Soluble
Partition coefficient (n-octanol/water): Not available
VOC content: < 0.2 %; < 2 g/l (calculated)
Viscosity: 200,000 - 300,000 mPa.s

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Will not occur.
Incompatible materials: None
Conditions to avoid: Heat. Do not freeze.

11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity: May cause irritation to the digestive tract. LD50 (rat) 6,140 mg/kg ((highest dose achieved))
Acute dermal product toxicity: This product is considered to have low dermal toxicity. LD50 (rabbit) 10,611 mg/kg ((highest dose achieved))

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbon Oil</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbon Oil</td>
<td>No Records</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

International Air Transportation (ICAO/IATA)

- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

Water Transportation (IMO/IMDG)

- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information

- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12(b) Export Notification: None above reporting de minimus
- CERCLA/SARA Section 302 EHS: None above reporting de minimus
- CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
- CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Ethylene glycol (CAS# 107-21-1).
- California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

- CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format., First issue.
Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Power Grab Heavy Duty Construction Adhesive
IDH number: 1363134 1365863
Product type: Adhesive

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Telephone: 800.624.7767
Transportation Emergency Telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>pasty</th>
<th>HEALTH:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>White</td>
<td>FLAMMABILITY:</td>
</tr>
<tr>
<td>Odor:</td>
<td>Slight</td>
<td>PHYSICAL HAZARD:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal Protection:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not available</td>
</tr>
</tbody>
</table>

CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.

Relevant routes of exposure: Ingestion, Skin

Potential Health Effects

Inhalation: Not a relevant route of exposure. Contains crystalline silica (quartz), which is classified as a possible carcinogen. However, the crystalline silica present in this product is encapsulated in the liquid and will only be liberated if the product is sanded or abraded, and even then what is liberated will not be pure crystalline silica. Appropriate precautions, however, should be taken if the product is sanded or abraded to prevent personnel from breathing the dust.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation.

Eye contact: May cause irritation.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: None known

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

Skin contact: Wash with soap and water. If symptoms develop and persist, get medical attention.

Eye contact: Flush eyes with plenty of water for at least 5 minutes. If irritation persists seek medical attention.
Ingestion: Do not induce vomiting. Seek medical advice.

5. FIRE FIGHTING MEASURES

Flash point: > 93.3 °C (> 199.94 °F) no method
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: carbon dioxide, foam, powder, water spray jet, fine water spray
Special firefighting procedures: Not available
Unusual fire or explosion hazards: None known
Hazardous combustion products: Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: None known
Clean-up methods: Scrape up as much material as possible. Clean residue with soap and water.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes. Avoid prolonged or repeated skin contact with this material. Do not taste or swallow. Keep out of the reach of children.
Storage: Protect from freezing. Store in a cool, dry area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TW Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Not normally needed.
Respiratory protection: No personal respiratory protective equipment normally required.
Eye/face protection: No special measures required if used properly.
Skin protection: No special measures required if used properly.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: pasty
Color: White
Odor: Slight
Odor threshold: Not available
pH: 8 - 9
Vapor pressure: Not available
Boiling point/range: Not available
Melting point/ range: Not available
Specific gravity: 1.25 - 1.35 (Water = 1)
Vapor density: 0.62 (Air = 1)
Flash point: > 93.3 °C (> 199.94 °F) no method
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: 1 (Water = 1)
Solubility in water: emulsifiable
Partition coefficient (n-octanol/water): Not available
VOC content: < 2.00 % (calculated)

10. STABILITY AND REACTIVITY

| Stability: Stable under normal conditions of storage and use. |
| Hazardous reactions: Will not occur. |
| Hazardous decomposition products: None known |
| Incompatible materials: Strong acids and oxidizing agents. |
| Conditions to avoid: None known |

11. TOXICOLOGICAL INFORMATION

Product toxicity data: The toxicological profile of the formulation was evaluated based upon the data of the ingredients. This product is not toxic as defined by the Federal Hazardous Substance Act.

Acute inhalation product toxicity: Due to the low volatility of the product there are no hazards associated with inhalation under normal conditions of use

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>None</td>
</tr>
<tr>
<td>Identification number:</td>
<td>None</td>
</tr>
<tr>
<td>Packing group:</td>
<td>None</td>
</tr>
</tbody>
</table>

International Air Transportation (ICAO/IATA)

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
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</tr>
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<tbody>
<tr>
<td>Hazard class or division:</td>
<td>None</td>
</tr>
<tr>
<td>Identification number:</td>
<td>None</td>
</tr>
<tr>
<td>Packing group:</td>
<td>None</td>
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</table>

Water Transportation (IMO/IMDG)

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>None</td>
</tr>
<tr>
<td>Identification number:</td>
<td>None</td>
</tr>
<tr>
<td>Packing group:</td>
<td>None</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12(b) Export Notification: None above reporting de minimus

CERCLA/SARA Section 302 EHS: None above reporting de minimus

CERCLA/SARA Section 311/312: None

CERCLA/SARA 313: None above reporting de minimus

California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status: Not applicable.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Power Grab All Purpose Construction Adhesive

IDH number: 1363132 1415057

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 800.624.7767
Transportation Emergency Telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: pasty
Color: White
Odor: Slight

HEALTH: 1
FLAMMABILITY: 0
PHYSICAL HAZARD: 0

CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.

Relevant routes of exposure: Ingestion, Skin

Potential Health Effects

Inhalation: Not a relevant route of exposure. Contains crystalline silica (quartz), which is classified as a possible carcinogen. However, the crystalline silica present in this product is encapsulated in the liquid and will only be liberated if the product is sanded or abraded, and even then what is liberated will not be pure crystalline silica. Appropriate precautions, however, should be taken if the product is sanded or abraded to prevent personnel from breathing the dust.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation.

Eye contact: May cause irritation.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: None known

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

Skin contact: Wash with soap and water. If symptoms develop and persist, get medical attention.

Eye contact: Flush eyes with plenty of water for at least 5 minutes. If irritation persists seek medical attention.
Ingestion: Do not induce vomiting. Seek medical advice.

5. FIRE FIGHTING MEASURES

Flash point: > 200 °F (> 93.33 °C) no method
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: carbon dioxide, foam, powder, water spray jet, fine water spray
Special firefighting procedures: Not available
Unusual fire or explosion hazards: None known
Hazardous combustion products: Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.
Environmental precautions: None known
Clean-up methods: Scrape up as much material as possible. Clean residue with soap and water.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes. Avoid prolonged or repeated skin contact with this material. Do not taste or swallow. Keep out of the reach of children.
Storage: Protect from freezing. Store in a cool, dry area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

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<th>OSHA PEL</th>
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<th>OTHER</th>
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<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m³ TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m³ TWA Respirable. 0.3 mg/m³ TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Not normally needed.
Respiratory protection: No personal respiratory protective equipment normally required.
Eye/face protection: No special measures required if used properly.
Skin protection: No special measures required if used properly.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: pasty
Color: White
Odor: Slight
Odor threshold: Not available
pH: 8 - 9
Vapor pressure: Not available
Boiling point/range: Not available
Melting point/range: Not available
Specific gravity: 1.25 - 1.35 (Water = 1)
Vapor density: 0.6200 (Air = 1)
Flash point: > 200 °F (> 93.33 °C) no method
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: 1 (Water = 1)
Solubility in water: emulsifiable
Partition coefficient (n-octanol/water): Not available
VOC content: < 2.00 % (calculated)

10. STABILITY AND REACTIVITY
Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Will not occur.
Hazardous decomposition products: None known
Incompatible materials: Strong acids and oxidizing agents.
Conditions to avoid: None known

11. TOXICOLOGICAL INFORMATION
Product toxicity data: The toxicological profile of the formulation was evaluated based upon the data of the ingredients. This product is not toxic as defined by the Federal Hazardous Substance Act.
Acute inhalation product toxicity: Due to the low volatility of the product there are no hazards associated with inhalation under normal conditions of use

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
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<td>Quartz (SiO2)</td>
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<td>No</td>
</tr>
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<table>
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<tr>
<th>Hazardous components</th>
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<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
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</table>

12. ECOLOGICAL INFORMATION
Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: None
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status: Not applicable.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
CONSUMER MATERIAL SAFETY DATA SHEET
NAME OF PRODUCT: Loctite Power Grab All Purpose
MSDS DATE: 09-23-2004 Rev 02/09

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Loctite Power Grab All Purpose Adhesive
PRODUCT CODES: IDH 841982
SUPPLIER: Henkel Consumer Adhesives.
ADDRESS: 32150 Just Imagine Drive
Avon, Ohio 44011
DOMESTIC EMERGENCY PHONE: Chemtrec 1-800-424-9300
In Canada Canutec 613-996-6666
OTHER CALLS: Regulatory Affairs 440-937-7000
FAX PHONE: Regulatory Affairs 440-937-7077
CHEMICAL FAMILY: Acrylic Copolymer
PRODUCT USE: Consumer Product; Construction Adhesive
PREPARED BY: Regulatory Affairs
MSDS PREPARATION DATE: 09-23-2004 Rev 01/09

SECTION 1 NOTES:

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>CAS NO.</th>
<th>% WT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica</td>
<td>14808-60-7</td>
<td>0.1-1%</td>
</tr>
</tbody>
</table>

The Crystalline silica that is present is bound within the adhesive matrix and therefore will not become airborne under normal conditions of use. The remaining ingredients are non-hazardous.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: May Cause Skin and Eye Irritation.
This product is intended for consumer use. Keep out of reach of children.

ROUTES OF ENTRY: oral, dermal

POTENTIAL HEALTH EFFECTS
EYES: May cause irritation.
SKIN: May cause irritation especially on-prolonged contact.
INGESTION: May cause irritation of gastrointestinal tract, nausea, vomiting and diarrhea.
INHALATION: Not expected to be a hazard under normal conditions of use.
SECTION 4: FIRST AID MEASURES

EYES: Rinse eyes with plenty of water. If irritation persists seek medical advice.

SKIN: Wash skin with soap and water. Seek medical attention if irritation persists.

INGESTION: Do not induce vomiting. Seek medical attention.

INHALATION: Remove to fresh air. Seek medical attention if symptoms persist.

SECTION 5: FIRE-FIGHTING MEASURES

NFPA HAZARD CLASSIFICATION
HEALTH: FLAMMABILITY: REACTIVITY:  <1,0,0>
EXTINGUISHING MEDIA:  water, CO2, Dry chemical
UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.
HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon at high temperatures.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Scrape or pick up spilled product. Surface areas should be cleaned immediately before product cures. Use plenty of water to clean surfaces. Soap or surfactant may be required to remove residual product.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Store in a cool, dry place. Protect from freezing. Avoid prolonged skin contact. Keep away from eyes. Keep out of reach of children.

See label on product for use directions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: not required under normal use conditions. Avoid generating dusts of cured material.
VENTILATION: not required under normal use conditions.
RESPIRATORY PROTECTION: not required under normal use conditions.
EYE PROTECTION: not required under normal use conditions.
SKIN PROTECTION: not required under normal use conditions. Use impervious gloves for long term contact. Wash hands after using.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White paste
ODOR: Slight odor.
PHYSICAL STATE: Solid
pH AS SUPPLIED: 8.0-9.0
SPECIFIC GRAVITY (H2O = 1): 1.25-1.35
SOLUBILITY IN WATER: Emulsifiable
EVAPORATION RATE: 1 (water=1)
VAPOR DENSITY 0.62 (air=1)
FLASHPOINT >200 Deg F

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable
HAZARDOUS POLYMERIZATION: Will not occur
INCOMPATIBILITY: Strong oxidizers, Strong Acids

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: The toxicological profile of the formulation was evaluated based upon the data of the ingredients. This product is not toxic as defined by the Federal Hazardous Substance Act.

Toxicological information for regulated components.
Crystalline silica OSHA PEL 0.1mg/kg LD50: Not available

Crystalline silica is an IARC listed lung carcinogen. Crystalline silica in this product will not typically become airborne during normal conditions of use.

SECTION 11 NOTES Contact Regulatory Affairs if further information is required.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:
Follow federal, state and local regulations that may be applicable for disposal of product and empty container.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
PROPER SHIPPING NAME: Not Regulated
HAZARD CLASS: N/A

IATA
PROPER SHIPPING NAME: Not Regulated
HAZARD CLASS: N/A
SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

This product is labeled in accordance to the Consumer Product Safety regulations as defined by the Federal Hazardous Substances Act.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: Information provided in this MSDS is intended to provide supplementary information for consumer uses of this product. This product is not intended for industrial uses. Contact Regulatory Affairs for additional information.

PREPARATION INFORMATION: Created by Regulatory Affairs.

DISCLAIMER: The information appearing herein is furnished without express or implied warranty and is based upon tests and data believed to be accurate to the best knowledge of Henkel Consumer Adhesives Inc. It is the user's responsibility to ensure that the product is handled safely and that the instructions for use are properly communicated and followed. Henkel Consumer Adhesives Inc. assumes no legal responsibility or liability for any use not in accordance with the use described in this MSDS or in the product labeling.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL300 Foamboard Construction Adhesive
IDH number: 1421930 1421941
Product type: Water based adhesive

Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Issue date: 06/08/2010

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: pasty
Color: Blue
Odor: Mild, acrylic

CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.

Potential Health Effects

Inhalation: Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release.
Skin contact: May cause slight irritation to skin.
Eye contact: May cause slight irritation to eyes on contact.

Existing conditions aggravated by exposure: None known

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: No specific treatment is necessary since material is not likely to be hazardous by inhalation.
Skin contact: Wash affected area immediately with soap and water.
Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. If symptoms develop and persist, get medical attention.
Ingestion: Consult a physician if necessary.
5. FIRE FIGHTING MEASURES

- **Flash point:** not applicable
- **Autoignition temperature:** Not available
- **Flammable/Explosive limits - lower:** Not available
- **Flammable/Explosive limits - upper:** Not available
- **Extinguishing media:** Carbon dioxide, foam, powder Water fog.
- **Special firefighting procedures:** Use water spray to keep fire exposed containers cool and disperse vapors.
- **Unusual fire or explosion hazards:** Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
- **Hazardous combustion products:** Oxides of carbon. Oxides of nitrogen.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

- **Environmental precautions:** Not available
- **Clean-up methods:** Absorb spill with inert material. Shovel material into appropriate container for disposal.

7. HANDLING AND STORAGE

- **Handling:** Avoid prolonged or repeated skin contact with this material. Keep out of the reach of children.
- **Storage:** For safe storage, store at or above 0 °C (32°F) Keep from freezing. Store in a cool, dry area. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

- **Engineering controls:** Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
- **Respiratory protection:** No personal respiratory protective equipment normally required.
- **Eye/face protection:** Safety goggles or safety glasses with side shields.
- **Skin protection:** Suitable protective clothing
### 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Physical state:** pasty
- **Color:** Blue
- **Odor:** Mild, acrylic
- **Odor threshold:** Not available
- **pH:** 7.00 - 7.50
- **Vapor pressure:** 15.0000000 mm hg (20.0 °C (68°F))
- **Boiling point/range:** 100 °C (212°F)
- **Melting point/ range:** Not available
- **Specific gravity:** 1.224
- **Vapor density:** Heavier than air
- **Flash point:** Not applicable
- **Flammable/Explosive limits - lower:** Not available
- **Flammable/Explosive limits - upper:** Not available
- **Autoignition temperature:** Not available
- **Evaporation rate:** < 0.6 (Butyl acetate = 1)
- **Solubility in water:** Soluble
- **Partition coefficient (n-octanol/water):** Not available
- **VOC content:** < 1 %; < 50 g/l (calculated)
- **Viscosity:** 280,000.00 - 380,000.00 mPa.s

### 10. STABILITY AND REACTIVITY

- **Stability:** Stable under normal conditions of storage and use.
- **Hazardous reactions:** Will not occur.
- **Hazardous decomposition products:** Oxides of carbon. Oxides of nitrogen.
- **Incompatible materials:** None
- **Conditions to avoid:** Heat. Do not freeze.

### 11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

#### Health Effects/Target Organs
- Quartz (SiO2): Immune system, Lung, Some evidence of carcinogenicity

### 12. ECOLOGICAL INFORMATION

- **Ecological information:** Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format, First issue.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation’s products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation’s products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL Premium Polyurethane Construction Adhesive  
IDH number: 828470, 1390594, 1390595  
Product type: 1-component-polyurethane adhesive  
Region: United States  
Company address: Henkel Corporation  
One Henkel Way  
Rocky Hill, Connecticut 06067  
Contact information:  
Telephone: 800.624.7767  
Transportation Emergency Telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: high viscosity  
Color: beige  
Odor: like vegetable oil  
HMIS:  
HEALTH: *2  
FLAMMABILITY: 1  
PHYSICAL HAZARD: 1  
Personal Protection: See MSDS Section 8

WARNING: HARMFUL IF INHALED.  
CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.  
MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.

Relevant routes of exposure: Inhalation, Skin, Eyes, Ingestion

Potential Health Effects:

Inhalation: As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. Chronic overexposure to isocyanates has been reported to cause lung damage. Dryness of nasal passages, sore throat, cough, tightness of chest, shortness of breath. Persons suffering from allergic reactions to isocyanates should avoid contact with the product. This product may cause sensitization by inhalation and skin contact. May cause respiratory tract irritation.

Skin contact: Contact with skin can cause irritation and allergic reaction (sensitization) in some individuals. This product may discolor the skin.

Eye contact: Contact with eyes will cause irritation. Ingestion of this product may cause nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: Development of preexisting skin or lung allergy symptoms may increase. Asthma.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talc</td>
<td>14807-96-6</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Methylenediisocyanate (phenylisocyanate)</td>
<td>101-68-8</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Hydrocarbon C11-25 de aromatized</td>
<td>64742-46-7</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Methylene bisphenyl isocyanate</td>
<td>26447-40-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Diphenylmethane-diisocyanate, isomers and homologues</td>
<td>9016-87-9</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

**Inhalation:** If inhaled, immediately remove the affected person to fresh air. Immediate medical treatment necessary.

**Skin contact:** Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention. Remove contaminated clothes.

**Eye contact:** In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

**Ingestion:** Do not induce vomiting. Rinse the mouth. Drink plenty of water. Immediate medical advice necessary.

**Notes to physician:** An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate. The physician's judgment should be used to control symptoms and clinical condition based on the individual reactions of the patient.

5. FIRE FIGHTING MEASURES

**Flash point:** > 200 °F (> 93.33 °C) no method

**Autoignition temperature:** No information available.

**Flammable/Explosive limits - lower:** 1.6 %

**Flammable/Explosive limits - upper:** 10.2 %

**Extinguishing media:** Water fog. Foam Carbon dioxide.

**Special firefighting procedures:** Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.

**Unusual fire or explosion hazards:** None known

**Hazardous combustion products:** Nitrous gases Irritating fumes. Isocyanate vapors.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Environmental precautions:** Do not empty into drains / surface water / ground water.

**Clean-up methods:** Ensure adequate ventilation. Scrape up spilled material and place in a closed container for disposal. Wear suitable protective clothing, gloves and eye/face protection.

7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes, skin and clothing. Avoid extreme temperatures. Exposure to vapors of heated MDI can be extremely dangerous. Wash thoroughly after handling. Protect from moisture. Use only with adequate ventilation.

**Storage:** For safe storage, store between 18.3 °C (64.9 °F) and 40 °C (104°F) Avoid moisture. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talc</td>
<td>2 mg/m³ TWA Respirable fraction.</td>
<td>20 MPPCF TWA Respirable. 0.1 mg/m³ TWA Respirable. 0.3 mg/m³ TWA Total dust.</td>
<td>None</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Methylenebis(phenylisocyanate)</td>
<td>0.005 ppm TWA</td>
<td>0.02 ppm (0.2 mg/m³) Ceiling</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Hydrocarbon C11-25 dearomatized</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Methylene bisphenyl isocyanate</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Diphenylmethane-diisocyanate, isomers and homologues</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls:
Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection:
Observe OSHA regulations for respiratory use (29 CFR 1910.134). Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. Respirator with combination filter for vapor/particulate. However, due to the poor warning properties of MDI, proper fit and timely replacement of filter elements must be ensured.

Eye/face protection:
Safety glasses with side-shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection:
Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: high viscosity
Color: beige
Odor: like vegetable oil
Odor threshold: Not available
pH: Neutral
Vapor pressure: Not available
Boiling point/range: 172 - 341 °C (341.6 - 645.8 °F) no method
Melting point/ range: Not applicable
Specific gravity: 1.2600
Vapor density: Heavier than air
Flash point: > 200 °F (> 93.33 °C) no method
Flammable/Explosive limits - lower: 1.6 %
Flammable/Explosive limits - upper: 10.2 %
Autoignition temperature: No information available.
Evaporation rate: Not available
Solubility in water: Slightly soluble
Partition coefficient (n-octanol/water): Not available
VOC content: < 4.00 %; 50 g/l
10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: Contact with moisture, other materials that react with isocyanates, or temperatures above 350° F (177° C), may cause polymerization.

Hazardous decomposition products: Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. nitrogen oxides Aromatic isocyanates. carbon oxides.


Conditions to avoid: Avoid moisture. Keep away from open flames, hot surfaces and sources of ignition. Prolonged exposure to heat.

11. TOXICOLOGICAL INFORMATION

Acute dermal product toxicity: May cause sensitization by skin contact.

Acute inhalation product toxicity: May cause sensitization by inhalation.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talc</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Methylenebis(phenylisocyanate)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Hydrocarbon C11-25 deaoromatized</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Methylene bisphenyl isocyanate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Diphenylmethane-disocyanate, isomers and homologues</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Hazardous components

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talc</td>
<td>Irritant, Lung; Some evidence of carcinogenicity</td>
</tr>
<tr>
<td>Methylenebis(phenylisocyanate)</td>
<td>Irritant, Respiratory, Allergen</td>
</tr>
<tr>
<td>Hydrocarbon C11-25 deaoromatized</td>
<td>Irritant</td>
</tr>
<tr>
<td>Methylene bisphenyl isocyanate</td>
<td>Allergen, Irritant, Mutagen, Respiratory</td>
</tr>
<tr>
<td>Diphenylmethane-disocyanate, isomers and homologues</td>
<td>Allergen, Irritant, Kidney, Liver, Respiratory</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>U.S. Department of Transportation Ground (49 CFR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name:</td>
</tr>
<tr>
<td>Hazard class or division:</td>
</tr>
<tr>
<td>Identification number:</td>
</tr>
<tr>
<td>Packing group:</td>
</tr>
</tbody>
</table>
International Air Transportation (ICAO/IATA)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Hazard class or division</td>
<td>None</td>
</tr>
<tr>
<td>Identification number</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
</tbody>
</table>

Water Transportation (IMO/IMDG)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Hazard class or division</td>
<td>None</td>
</tr>
<tr>
<td>Identification number</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

United States Regulatory Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA 8 (b) Inventory Status</td>
<td>All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.</td>
</tr>
<tr>
<td>TSCA 12(b) Export Notification</td>
<td>None above reporting de minimus</td>
</tr>
<tr>
<td>CERCLA/SARA Section 302 EHS</td>
<td>None above reporting de minimus</td>
</tr>
<tr>
<td>CERCLA/SARA Section 311/312</td>
<td>Immediate Health, Delayed Health</td>
</tr>
<tr>
<td>CERCLA/SARA 313</td>
<td>This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372): Methylenebis(phenylisocyanate) (CAS# 101-68-8). Diphenylmethane-diisocyanate, isomers and homologues (CAS# 9016-87-9).</td>
</tr>
</tbody>
</table>

California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEPA DSL/NDSL Status</td>
<td>All components are listed on or are exempt from listing on the Domestic Substances List.</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation’s products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Power Grab Molding & Paneling Construction Adhesive
IDH number: 1363135
Product type: Adhesive
Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 800.624.7767
Transportation Emergency Telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: pasty
Color: White
Odor: Slight

HMIS:
HEALTH: 1
FLAMMABILITY: 0
PHYSICAL HAZARD: 0
Personal Protection: Not available

CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.

Relevant routes of exposure: Ingestion, Skin

Potential Health Effects

Inhalation: Not a relevant route of exposure. Contains crystalline silica (quartz), which is classified as a possible carcinogen. However, the crystalline silica present in this product is encapsulated in the liquid and will only be liberated if the product is sanded or abraded, and even then what is liberated will not be pure crystalline silica. Appropriate precautions, however, should be taken if the product is sanded or abraded to prevent personnel from breathing the dust.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation.

Eye contact: May cause irritation.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: None known

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

Skin contact: Wash with soap and water. If symptoms develop and persist, get medical attention.

Eye contact: Flush eyes with plenty of water for at least 5 minutes. If irritation persists seek medical attention.
Ingestion: Do not induce vomiting. Seek medical advice.

5. FIRE FIGHTING MEASURES

Flash point: > 93.3 °C (> 199.94 °F) no method
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: carbon dioxide, foam, powder, water spray jet, fine water spray
Special firefighting procedures: Not available
Unusual fire or explosion hazards: None known
Hazardous combustion products: Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: None known
Clean-up methods: Scrape up as much material as possible. Clean residue with soap and water.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes. Avoid prolonged or repeated skin contact with this material. Do not taste or swallow. Keep out of the reach of children.
Storage: Protect from freezing. Store in a cool, dry area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Not normally needed.
Respiratory protection: No personal respiratory protective equipment normally required.
Eye/face protection: No special measures required if used properly.
Skin protection: No special measures required if used properly.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: pasty
Color: White
Odor: Slight
Odor threshold: Not available
pH: 8 - 9
Vapor pressure: Not available
Boiling point/range: Not available
Melting point/ range: Not available
Specific gravity: 1.25 - 1.35 (Water = 1)
Vapor density: 0.62 (Air = 1)
Flash point: > 93.3 °C (> 199.94 °F) no method
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: 1 (Water = 1)
Solubility in water: emulsifiable
Partition coefficient (n-octanol/water): Not available
VOC content: < 2.00 % (calculated)

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: Will not occur.

Hazardous decomposition products: None known

Incompatible materials: Strong acids and oxidizing agents.

Conditions to avoid: None known

11. TOXICOLOGICAL INFORMATION

Product toxicity data: The toxicological profile of the formulation was evaluated based upon the data of the ingredients. This product is not toxic as defined by the Federal Hazardous Substance Act.

Acute inhalation product toxicity: Due to the low volatility of the product there are no hazards associated with inhalation under normal conditions of use

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Hazard class or division</td>
<td>None</td>
</tr>
<tr>
<td>Identification number</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
</tbody>
</table>

International Air Transportation (ICAO/IATA)

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Hazard class or division</td>
<td>None</td>
</tr>
<tr>
<td>Identification number</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
</tbody>
</table>

Water Transportation (IMO/IMDG)

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Hazard class or division</td>
<td>None</td>
</tr>
<tr>
<td>Identification number</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

United States Regulatory Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA 8 (b) Inventory Status</td>
<td>All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.</td>
</tr>
<tr>
<td>TSCA 12(b) Export Notification</td>
<td>None above reporting de minimus</td>
</tr>
<tr>
<td>CERCLA/SARA Section 302 EHS</td>
<td>None above reporting de minimus</td>
</tr>
<tr>
<td>CERCLA/SARA Section 311/312</td>
<td>None</td>
</tr>
<tr>
<td>CERCLA/SARA 313</td>
<td>None</td>
</tr>
<tr>
<td>California Proposition 65</td>
<td>This product contains a chemical known in the State of California to cause cancer.</td>
</tr>
</tbody>
</table>

Canada Regulatory Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEPA DSL/NDSL Status</td>
<td>All components are listed on or are exempt from listing on the Canadian Domestic Substances List.</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation’s products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL375 Heavy Duty Construction Adhesive  
IDH number: 1410944 1432215

Product type: Assembly adhesive, solvent

Company address: 
Henkel Corporation  
One Henkel Way  
Rocky Hill, Connecticut 06067

Contact information: 
Telephone: 800.624.7767  
Transportation Emergency Telephone: 800.424.9300

Region: United States

2. HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Pasty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Beige</td>
</tr>
<tr>
<td>Odor:</td>
<td>Slightly, mineral-oil-like</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH:</td>
</tr>
<tr>
<td>FLAMMABILITY:</td>
</tr>
<tr>
<td>PHYSICAL HAZARD:</td>
</tr>
</tbody>
</table>

Personal Protection: See MSDS Section 8

DANGER: 
EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects:

**Inhalation:** Irritates the nose, throat and respiratory system. Exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effects in the liver, kidneys, and lungs. Overexposure to hexane may result in peripheral and central nervous system damage, which may be permanent. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

**Skin contact:** Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

**Eye contact:** Contact with eyes can cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

**Ingestion:** Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: Eye, skin and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates, petroleum, steam-cracked, polymd.</td>
<td>68131-77-1</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>64741-84-0</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>5 - 10</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: If inhaled, immediately remove the affected person to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

Skin contact: Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing.

Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion: Do not induce vomiting, seek medical advice immediately.

5. FIRE FIGHTING MEASURES

Flash point: 0 °F (-17.78 °C) no method

Autoignition temperature: Not available

Flammable/Explosive limits - lower: 1 %

Flammable/Explosive limits - upper: 15 %

Extinguishing media: Foam, dry chemical or carbon dioxide. In case of fire, keep containers cool with water spray.

Special firefighting procedures: Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.

Unusual fire or explosion hazards: Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel along floor to an ignition source.

Hazardous combustion products: Carbon dioxide. Carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Ventilate area.

Clean-up methods: Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear suitable protective clothing, gloves and eye/face protection.
7. HANDLING AND STORAGE

Handling:
Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers. Use only in well-ventilated areas. Keep out of the reach of children.

Storage:
Keep away from heat, spark and flame. Store in a cool, dry, well-ventilated area. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates, petroleum, steam-cracked, polymd.</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Toluene</td>
<td>20 ppm TWA</td>
<td>200 ppm TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>(SKIN) 50 ppm TWA</td>
<td>500 ppm (1,800 mg/m³) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Ethanol</td>
<td>1,000 ppm STEL</td>
<td>1,000 ppm (1,900 mg/m³) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>5 mg/m³ TWA mist</td>
<td>5 mg/m³ TWA mist</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>10 mg/m³ STEL</td>
<td>10 mg/m³ STEL</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10 mg/m³ TWA</td>
<td>15 mg/m³ TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO₂)</td>
<td>0.025 mg/m³ TWA Respirable fraction.</td>
<td>2.4 MPFCF TWA Respirable. 0.1 mg/m³ TWA Respirable. 0.3 mg/m³ TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. When workplace hazards warrant the use of a respirator, appropriate respirators must be used, and a program that follows 29 CFR 1910.134 must be followed.

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>pasty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>beige</td>
</tr>
<tr>
<td>Odor:</td>
<td>slightly, mineral-oil-like</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not available</td>
</tr>
<tr>
<td>pH:</td>
<td>not applicable</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>155 mm hg (20 °C (68°F))</td>
</tr>
<tr>
<td>Boiling point/range:</td>
<td>65 - 110 °C (149°F - 230°F) no method</td>
</tr>
<tr>
<td>Melting point/ range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>1.1210</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>Heavier than air</td>
</tr>
<tr>
<td>Flash point:</td>
<td>0 °F (-17.78 °C) no method</td>
</tr>
</tbody>
</table>
**10. STABILITY AND REACTIVITY**

**Stability:** Stable under normal conditions of storage and use.

**Hazardous reactions:** Will not occur.

**Hazardous decomposition products:** Carbon dioxide, carbon monoxide and irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

**Incompatible materials:** Strong oxidizing agents.

**Conditions to avoid:** Heat, flames, sparks and other sources of ignition.

---

**11. TOXICOLOGICAL INFORMATION**

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates, petroleum, steam-cracked, polymd.</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Toluene</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Ethanol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>Group 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates, petroleum, steam-cracked, polymd.</td>
<td>Irritant</td>
</tr>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>Irritant</td>
</tr>
<tr>
<td>Toluene</td>
<td>Behavioral, Cardiac, Central nervous system, Developmental, Ear, Irritant</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>Developmental, Irrant, Lung, Nervous System, Reproductive</td>
</tr>
<tr>
<td>Ethanol</td>
<td>Irrant, Central nervous system</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>Irritant</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Irritant, Respiratory, Some evidence of carcinogenicity</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

---

**12. ECOLOGICAL INFORMATION**

**Ecological information:** Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

**U.S. Department of Transportation Ground (49 CFR)**
- Proper shipping name: Adhesives
- Hazard class or division: 3
- Identification number: UN 1133
- Packing group: II
- DOT Reportable quantity: Toluene
- Exceptions: Consumer Commodity ORM-D (Not more than 5 L)

**International Air Transportation (ICAO/IATA)**
- Proper shipping name: Adhesives
- Hazard class or division: 3
- Identification number: UN 1133
- Packing group: II
- Exceptions: Consumer Commodity, ID 8000, Class 9, (Not more than 5 L)

**Water Transportation (IMO/IMDG)**
- Proper shipping name: ADHESIVES
- Hazard class or division: 3
- Identification number: UN 1133
- Packing group: II
- Exceptions: Limited quantity (Not more than 5 L).

15. REGULATORY INFORMATION

**United States Regulatory Information**
- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12(b) Export Notification: None above reporting de minimus
- CERCLA/SARA Section 302 EHS: None above reporting de minimus
- CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire
- CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Toluene (CAS# 108-88-3). n-Hexane (CAS# 110-54-3).
- California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**Canada Regulatory Information**
- CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation’s products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation’s products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL Tub Surround Adhesive
Product type: Water based adhesive
IDH number: 1402263
Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 800.624.7767
Transportation Emergency Telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: pasty
Color: white
Odor: Mild, acrylic

HMIS:
HEALTH: 1
FLAMMABILITY: 0
PHYSICAL HAZARD: 0
Personal Protection: See MSDS Section 8

CAUTION: MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects

Inhalation: May cause irritation to nose and throat. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release.

Skin contact: May cause slight irritation to skin.

Eye contact: May cause slight irritation to eyes on contact.

Ingestion: Not expected to be harmful by ingestion. Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Existing conditions aggravated by exposure: None known

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbon Oil</td>
<td>68527-25-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air in case of accidental inhalation of vapours.

Skin contact: Wash affected area immediately with soap and water.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. If symptoms develop and persist, get medical attention.

Ingestion: Consult a physician if necessary.
5. FIRE FIGHTING MEASURES

- **Flash point:** No flashpoint. Aqueous preparation.
- **Autoignition temperature:** Not available
- **Flammable/Explosive limits - lower:** Not available
- **Flammable/Explosive limits - upper:** Not available
- **Extinguishing media:** Carbon dioxide, foam, powder Water fog.
- **Special firefighting procedures:** Use water spray to keep fire exposed containers cool and disperse vapors.
- **Unusual fire or explosion hazards:** Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
- **Hazardous combustion products:** Oxides of carbon. Oxides of nitrogen.

6. ACCIDENTAL RELEASE MEASURES

- Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.
- **Environmental precautions:** Not available
- **Clean-up methods:** Absorb spill with inert material. Shovel material into appropriate container for disposal.

7. HANDLING AND STORAGE

- **Handling:** Avoid prolonged or repeated skin contact with this material. Keep out of the reach of children.
- **Storage:** For safe storage, store at or above 0 °C (32°F) Keep from freezing. Store in a cool, dry area. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbon Oil</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>100 mg/m3 Ceiling1 Aerosol.</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>2.4 MPPCF TWA Respirable.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

- **Engineering controls:** Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
- **Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
- **Eye/face protection:** Safety goggles or safety glasses with side shields.
Skin protection: Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>pasty</td>
</tr>
<tr>
<td>Color</td>
<td>white</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild, acrylic</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>7.0 - 7.5</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>15,000,000 mm hg (20.0 °C (68°F))</td>
</tr>
<tr>
<td>Boiling point/Range</td>
<td>100 °C (212°F)</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.4410</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Heavier than air</td>
</tr>
<tr>
<td>Flash point</td>
<td>No flashpoint. Aqueous preparation.</td>
</tr>
<tr>
<td>Flammable/Explosive limits - lower</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable/Explosive limits - upper</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>&lt; 1 (Butyl acetate = 1)</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC content</td>
<td>&lt; 0.2 %; &lt; 2 g/l (calculated)</td>
</tr>
<tr>
<td>Viscosity</td>
<td>200,000 - 300,000 mPa.s</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: Will not occur.


Incompatible materials: None

Conditions to avoid: Heat. Do not freeze.

11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity: May cause irritation to the digestive tract. LD50 (rat) 6,140 mg/kg (highest dose achieved))

Acute dermal product toxicity: This product is considered to have low dermal toxicity. LD50 (rabbit) 10,611 mg/kg (highest dose achieved)

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbon Oil</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbon Oil</td>
<td>No Records</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>None</td>
</tr>
<tr>
<td>Identification number:</td>
<td>None</td>
</tr>
<tr>
<td>Packing group:</td>
<td>None</td>
</tr>
</tbody>
</table>

International Air Transportation (ICAO/IATA)

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>None</td>
</tr>
<tr>
<td>Identification number:</td>
<td>None</td>
</tr>
<tr>
<td>Packing group:</td>
<td>None</td>
</tr>
</tbody>
</table>

Water Transportation (IMO/IMDG)

<table>
<thead>
<tr>
<th>Proper shipping name:</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class or division:</td>
<td>None</td>
</tr>
<tr>
<td>Identification number:</td>
<td>None</td>
</tr>
<tr>
<td>Packing group:</td>
<td>None</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12(b) Export Notification: None above reporting de minimus

CERCLA/SARA Section 302 EHS: None above reporting de minimus

CERCLA/SARA Section 311/312: Immediate Health, Delayed Health

CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Ethylene glycol (CAS# 107-21-1).

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format., First issue.
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Power Grab All Purpose Construction Adhesive
IDH number: 1363132 1415057
Product type: All-purpose adhesive
Region: United States
Company address: Contact information:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067
Telephone: 800.624.7767
Transportation Emergency Telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:
Physical state: pasty
Color: White
Odor: Slight
HEALTH: 1
FLAMMABILITY: 0
PHYSICAL HAZARD: 0
Personal Protection: See MSDS Section 8

CAUTION:
MAY CAUSE EYE AND SKIN IRRITATION.

Relevant routes of exposure: Ingestion, Skin

Potential Health Effects

Inhalation: Not a relevant route of exposure. Contains crystalline silica (quartz), which is classified as a possible carcinogen. However, the crystalline silica present in this product is encapsulated in the liquid and will only be liberated if the product is sanded or abraded, and even then what is liberated will not be pure crystalline silica. Appropriate precautions, however, should be taken if the product is sanded or abraded to prevent personnel from breathing the dust.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation.

Eye contact: May cause irritation.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: None known

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

Skin contact: Wash with soap and water. If symptoms develop and persist, get medical attention.

Eye contact: Flush eyes with plenty of water for at least 5 minutes. If irritation persists seek medical attention.
Ingestion: Do not induce vomiting. Seek medical advice.

5. FIRE FIGHTING MEASURES

Flash point: > 200 °F (> 93.33 °C) no method
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: carbon dioxide, foam, powder, water spray jet, fine water spray
Special firefighting procedures: Not available
Unusual fire or explosion hazards: None known
Hazardous combustion products: Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: None known
Clean-up methods: Scrape up as much material as possible. Clean residue with soap and water.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes. Avoid prolonged or repeated skin contact with this material. Do not taste or swallow. Keep out of the reach of children.
Storage: Protect from freezing. Store in a cool, dry area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction. 2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

Engineering controls: Not normally needed.
Respiratory protection: No personal respiratory protective equipment normally required.
Eye/face protection: No special measures required if used properly.
Skin protection: No special measures required if used properly.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: pasty
Color: White
Odor: Slight
Odor threshold: Not available
pH: 8 - 9
Vapor pressure: Not available
Boiling point/range: Not available
Melting point/ range: Not available
Specific gravity: 1.25 - 1.35 (Water = 1)
Vapor density: 0.6200 (Air = 1)
Flash point: > 200 °F (> 93.33 °C) no method
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: 1 (Water = 1)
Solubility in water: emulsifiable
Partition coefficient (n-octanol/water): Not available
VOC content: < 2.00 % (calculated)

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Will not occur.
Hazardous decomposition products: None known
Incompatible materials: Strong acids and oxidizing agents.
Conditions to avoid: None known

11. TOXICOLOGICAL INFORMATION

Product toxicity data: The toxicological profile of the formulation was evaluated based upon the data of the ingredients. This product is not toxic as defined by the Federal Hazardous Substance Act.

Acute inhalation product toxicity: Due to the low volatility of the product there are no hazards associated with inhalation under normal conditions of use

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

International Air Transportation (ICAO/IATA)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

Water Transportation (IMO/IMDG)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information
- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12(b) Export Notification: None above reporting de minimus
- CERCLA/SARA Section 302 EHS: None above reporting de minimus
- CERCLA/SARA Section 311/312: None
- CERCLA/SARA 313: None above reporting de minimus
- California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information
- CEPA DSL/NDSL Status: Not applicable.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Power Grab Foamboard Construction Adhesive

IDH number: 1363133

Product type: Adhesive

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:
- HEALTH: 1
- FLAMMABILITY: 0
- PHYSICAL HAZARD: 0
- Personal Protection: Not available

Physical state: pasty
Color: White
Odor: Slight

CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.

Relevant routes of exposure: Ingestion, Skin

Potential Health Effects

Inhalation: Not a relevant route of exposure. Contains crystalline silica (quartz), which is classified as a possible carcinogen. However, the crystalline silica present in this product is encapsulated in the liquid and will only be liberated if the product is sanded or abraded, and even then what is liberated will not be pure crystalline silica. Appropriate precautions, however, should be taken if the product is sanded or abraded to prevent personnel from breathing the dust.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation.

Eye contact: May cause irritation.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: None known

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

Skin contact: Wash with soap and water. If symptoms develop and persist, get medical attention.

Eye contact: Flush eyes with plenty of water for at least 5 minutes. If irritation persists seek medical attention.
Ingestion: Do not induce vomiting. Seek medical advice.

5. FIRE FIGHTING MEASURES

Flash point: > 93.3 °C (> 199.94 °F) no method
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: carbon dioxide, foam, powder, water spray jet, fine water spray
Special firefighting procedures: Not available
Unusual fire or explosion hazards: None known
Hazardous combustion products: Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: None known
Clean-up methods: Scrape up as much material as possible. Clean residue with soap and water.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes. Avoid prolonged or repeated skin contact with this material. Do not taste or swallow. Keep out of the reach of children.
Storage: Protect from freezing. Store in a cool, dry area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Not normally needed.
Respiratory protection: No personal respiratory protective equipment normally required.
Eye/face protection: No special measures required if used properly.
Skin protection: No special measures required if used properly.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: pasty
Color: White
Odor: Slight
Odor threshold: Not available
pH: 8 - 9
Vapor pressure: Not available
Boiling point/range: Not available
Melting point/range: Not available
Specific gravity: 1.25 - 1.35 (Water = 1)
Vapor density: 0.62 (Air = 1)
Flash point: > 93.3 °C (> 199.94 °F) no method
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: 1 (Water = 1)
Solubility in water: emulsifiable
Partition coefficient (n-octanol/water): Not available
VOC content: < 2.00 % (calculated)

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Will not occur.
Hazardous decomposition products: None known
Incompatible materials: Strong acids and oxidizing agents.
Conditions to avoid: None known

11. TOXICOLOGICAL INFORMATION

Product toxicity data: The toxicological profile of the formulation was evaluated based upon the data of the ingredients. This product is not toxic as defined by the Federal Hazardous Substance Act.

Acute inhalation product toxicity: Due to the low volatility of the product there are no hazards associated with inhalation under normal conditions of use

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

Hazardous components
Quartz (SiO2)

Health Effects/Target Organs
Immune system, Lung, Some evidence of carcinogenicity

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: None
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL Mirror Mastic Adhesive
Product type: Assembly adhesive, solvent
IDH number: 1390934
Region: United States
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>pasty</th>
<th>HMIS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>beige</td>
<td>HEALTH:</td>
</tr>
<tr>
<td>Odor:</td>
<td>tart</td>
<td>FLAMMABILITY:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHYSICAL HAZARD:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal Protection:</td>
</tr>
</tbody>
</table>

DANGER: EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects

Inhalation: Irritates the nose, throat and respiratory system. Exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effects in the liver, kidneys, and lungs. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

Eye contact: Contact with eyes can cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: Eye, skin and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>79-20-9</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>5 - 10</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>142-82-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), light aliph., &lt;0.1% Benzol, highly flammable</td>
<td>64742-89-8</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: If inhaled, immediately remove the affected person to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

Skin contact: Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing.

Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion: Do not induce vomiting, seek medical advice immediately.

5. FIRE FIGHTING MEASURES

Flash point: -17.80 °C (0.04 °F) Tagliabue; (value for solvent)

Autoignition temperature: Not available

Flammable/Explosive limits - lower: 1 %

Flammable/Explosive limits - upper: 6.5 %

Extinguishing media: Foam, dry chemical or carbon dioxide. In case of fire, keep containers cool with water spray.

Special firefighting procedures: Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.

Unusual fire or explosion hazards: Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel along floor to an ignition source.

Hazardous combustion products: Carbon dioxide. Carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Ventilate area.

Clean-up methods: Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear suitable protective clothing, gloves and eye/face protection.
7. HANDLING AND STORAGE

Handling: Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers. Use only in well-ventilated areas. Keep out of the reach of children.

Storage: Keep away from heat, spark and flame. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>200 ppm TWA 250 ppm STEL</td>
<td>200 ppm (610 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Acetone</td>
<td>500 ppm TWA 750 ppm STEL</td>
<td>1,000 ppm (2,400 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>400 ppm TWA 500 ppm STEL</td>
<td>500 ppm (2,000 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), light aliph., &lt;0.1% Benzol, highly flammable</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>5 mg/m3 TWA mist 10 mg/m3 STEL STEL mist</td>
<td>5 mg/m3 TWA mist</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10 mg/m3 TWA</td>
<td>15 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. When workplace hazards warrant the use of a respirator, appropriate respirators must be used, and a program that follows 29 CFR 1910.134 must be followed.

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical state:       | pasty |
| Color:               | beige |
| Odor:                | tart |
| Odor threshold:      | Not available |
| pH:                  | not applicable |
| Vapor pressure:      | 155 mm hg (20 °C (68°F)) |
| Boiling point/range: | 65 - 121 °C (149°F - 249.8 °F) |
| Melting point/ range:| Not available |
| Specific gravity:    | 1.2990 |
| Vapor density:       | Heavier than air |
| Flash point:         | -17.80 °C (0.04 °F) Tagliabue; (value for solvent) |
| Flammable/Explosive limits - lower: | 1 % |
| Flammable/Explosive limits - upper: | 6.5 % |
Autoignition temperature: Not available
Evaporation rate: 5.50 (Butyl acetate = 1)
Solubility in water: Insoluble
Partition coefficient (n-octanol/water): Not available
VOC content: < 7 %; < 140 g/l (calculated)
Viscosity: 700,000 - 1,200,000 mPa.s

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Will not occur.
Hazardous decomposition products: Carbon dioxide, carbon monoxide and irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.
Incompatible materials: Strong oxidizing agents.
Conditions to avoid: Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Acetone</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), light aliph., &lt;0.1% Benzol, highly flammable</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>Blood, Central nervous system, Eyes, Irritant</td>
</tr>
<tr>
<td>Acetone</td>
<td>Blood, Central nervous system, Irritant, Reproductive</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>Central nervous system, Irritant</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), light aliph., &lt;0.1% Benzol, highly flammable</td>
<td>Irritant</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>Irritant</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Irritant, Respiratory, Some evidence of carcinogenicity</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Adhesives
Hazard class or division: 3
Identification number: UN 1133
Packing group: II
DOT Reportable quantity: Xylene (mixed)
Exceptions: Consumer Commodity ORM-D (Not more than 5 L)

International Air Transportation (ICAO/IATA)

Proper shipping name: Adhesives
Hazard class or division: 3
Identification number: UN 1133
Packing group: II
Exceptions: Consumer Commodity, ID 8000, Class 9, (Not more than 5 L)

Water Transportation (IMO/IMDG)

Proper shipping name: ADHESIVES (n-Heptane)
Hazard class or division: 3
Identification number: UN 1133
Packing group: II
Marine pollutant: n-Heptane
Exceptions: Limited quantity (Not more than 5 L).

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act inventory.
TSCA 12(b) Export Notification: Methyl acetate (CAS# 79-20-9), N-Heptane (CAS# 142-82-5).
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: Not applicable
16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation’s products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation’s products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL375 Heavy Duty Construction Adhesive Latex VOC  
IDH number: 1390599, 1390601, 1442952
Product type: Water based adhesive
Company address: Henkel Corporation  
One Henkel Way  
Rocky Hill, Connecticut 06067
Region: United States

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: pasty
Color: Off white
Odor: Mild, acrylic

HMIS:
HEALTH: 1
FLAMMABILITY: 0
PHYSICAL HAZARD: 0

CAUTION: MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure:
Inhalation, Skin contact

Potential Health Effects

Inhalation: May cause irritation to nose and throat. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release.

Skin contact: May cause slight irritation to skin.

Eye contact: May cause slight irritation to eyes on contact.

Ingestion: Not expected to be harmful by ingestion. Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Existing conditions aggravated by exposure: None known

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air in case of accidental inhalation of vapours.

Skin contact: Wash affected area immediately with soap and water.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. If symptoms develop and persist, get medical attention.

Ingestion: Consult a physician if necessary.
5. FIRE FIGHTING MEASURES

- **Flash point:** not applicable
- **Autoignition temperature:** Not available
- **Flammable/Explosive limits - lower:** Not available
- **Flammable/Explosive limits - upper:** Not available
- **Extinguishing media:** Carbon dioxide, foam, powder Water fog.
- **Special firefighting procedures:** Use water spray to keep fire exposed containers cool and disperse vapors.
- **Unusual fire or explosion hazards:** Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
- **Hazardous combustion products:** Oxides of carbon. Oxides of nitrogen.

6. ACCIDENTAL RELEASE MEASURES

- **Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.**
- **Environmental precautions:** Not available
- **Clean-up methods:** Absorb spill with inert material. Shovel material into appropriate container for disposal.

7. HANDLING AND STORAGE

- **Handling:** Avoid prolonged or repeated skin contact with this material. Keep out of the reach of children.
- **Storage:** For safe storage, store at or above 0 °C (32°F) Keep from freezing. Store in a cool, dry area. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>100 mg/m3 Ceiling1 Aerosol.</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable, 0.1 mg/m3 TWA Respirable, 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

- **Engineering controls:** Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
- **Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
- **Eye/face protection:** Safety goggles or safety glasses with side shields.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>pasty</td>
</tr>
<tr>
<td>Color</td>
<td>Off white</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild, acrylic</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>7.2 - 7.8</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>15.0000000 mm hg (20.0 °C (68°F))</td>
</tr>
<tr>
<td>Boiling point/range</td>
<td>100 °C (212°F)</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.224</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Heavier than air</td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flammable/Explosive limits - lower</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable/Explosive limits - upper</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>&lt; 0.6 (Butyl acetate = 1)</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC content</td>
<td>&lt; 0.1 %; &lt; 2 g/l (calculated)</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: Will not occur.


Incompatible materials: None

Conditions to avoid: Heat. Do not freeze.

11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity: May cause irritation to the digestive tract. LD50 (rat) 6,140 mg/kg ((highest dose achieved))

Acute dermal product toxicity: This product is considered to have low dermal toxicity. LD50 (rabbit) 10,611 mg/kg ((highest dose achieved))

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Dispose of according to Federal, State and local governmental regulations.

**Hazardous waste number:** It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

**U.S. Department of Transportation Ground (49 CFR)**

- **Proper shipping name:** Not regulated
- **Hazard class or division:** None
- **Identification number:** None
- **Packing group:** None

**International Air Transportation (ICAO/IATA)**

- **Proper shipping name:** Not regulated
- **Hazard class or division:** None
- **Identification number:** None
- **Packing group:** None

**Water Transportation (IMO/IMDG)**

- **Proper shipping name:** Not regulated
- **Hazard class or division:** None
- **Identification number:** None
- **Packing group:** None

15. REGULATORY INFORMATION

**United States Regulatory Information**

- **TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- **TSCA 12(b) Export Notification:** None above reporting de minimus
- **CERCLA/SARA Section 302 EHS:** None above reporting de minimus
- **CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health
- **CERCLA/SARA 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Ethylene glycol (CAS# 107-21-1).
- **California Proposition 65:** This product contains a chemical known in the State of California to cause cancer.

**Canada Regulatory Information**

- **CEPA DSL/NDSL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format., First issue.

**Prepared by:** Mary Ellen Roddy, Sr. Regulatory Affairs Specialist
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation’s products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation’s products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL200 Construction Adhesive  
Product type: Water based adhesive  
IDH number: 1390602 1390603  
Region: United States  
Company address: Henkel Corporation  
One Henkel Way  
Rocky Hill, Connecticut 06067  
Contact information:  
Telephone: 800.624.7767  
Transportation Emergency Telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:  
Physical state: pasty  
Color: Off white  
Odor: Mild, acrylic  
HEALTH: 1  
FLAMMABILITY: 0  
PHYSICAL HAZARD: 0  
Personal Protection: See MSDS Section 8

CAUTION: MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects

Inhalation: May cause irritation to nose and throat. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release.

Skin contact: May cause slight irritation to skin.

Eye contact: May cause slight irritation to eyes on contact.

Ingestion: Not expected to be harmful by ingestion. Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Existing conditions aggravated by exposure: None known

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication). See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air in case of accidental inhalation of vapours.

Skin contact: Wash affected area immediately with soap and water.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. If symptoms develop and persist, get medical attention.

Ingestion: Consult a physician if necessary.
5. FIRE FIGHTING MEASURES

Flash point: not applicable
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Carbon dioxide, foam, powder Water fog.
Special firefighting procedures: Use water spray to keep fire exposed containers cool and disperse vapors.
Unusual fire or explosion hazards: Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Not available
Clean-up methods: Absorb spill with inert material. Shovel material into appropriate container for disposal.

7. HANDLING AND STORAGE

Handling: Avoid prolonged or repeated skin contact with this material. Keep out of the reach of children.
Storage: For safe storage, store at or above 0 °C (32°F) Keep from freezing. Store in a cool, dry area. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>100 mg/m³ Ceiling1 Aerosol.</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m³ TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m³ TWA Respirable. 0.3 mg/m³ TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Eye/face protection: Safety goggles or safety glasses with side shields.
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: pasty
Color: Off white
Odor: Mild, acrylic
Odor threshold: Not available
pH: 7.2 - 7.8
Vapor pressure: 15,000,000 mm hg (20.0 °C (68°F))
Boiling point/range: 100 °C (212°F)
Melting point/range: Not available
Specific gravity: 1.224
Vapor density: Heavier than air
Flash point: not applicable
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: < 0.6 (Butyl acetate = 1)
Solubility in water: Soluble
Partition coefficient (n-octanol/water): Not available
VOC content: < 0.1 %; < 2 g/l (calculated)

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Will not occur.
Incompatible materials: None
Conditions to avoid: Heat. Do not freeze.

11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity: May cause irritation to the digestive tract. LD50 (rat) 6,140 mg/kg ((highest dose achieved))
Acute dermal product toxicity: This product is considered to have low dermal toxicity. LD50 (rabbit) 10,611 mg/kg (highest dose achieved)

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<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
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<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
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<th>Health Effects/Target Organs</th>
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</thead>
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<td>Ethylene glycol</td>
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</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

International Air Transportation (ICAO/IATA)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

Water Transportation (IMO/IMDG)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information
- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12(b) Export Notification: None above reporting de minimus
- CERCLA/SARA Section 302 EHS: None above reporting de minimus
- CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
- CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Ethylene glycol (CAS# 107-21-1).
- California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information
- CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL Landscape Block Adhesive
IDH number: 1390593 1390933
Product type: Assembly adhesive, solvent
Region: United States
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 800.624.7767
Transportation Emergency Telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects

Inhalation: Irritates the nose, throat and respiratory system. Exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effects in the liver, kidneys, and lungs. Overexposure to hexane may result in peripheral and central nervous system damage, which may be permanent. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

Eye contact: Contact with eyes can cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: Eye, skin and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>64741-84-0</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Distillates, petroleum, steam-cracked, polymd.</td>
<td>68131-77-1</td>
<td>5 - 10</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**Inhalation:** If inhaled, immediately remove the affected person to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

**Skin contact:** Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing.

**Eye contact:** In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

**Ingestion:** Do not induce vomiting, seek medical advice immediately.

5. FIRE FIGHTING MEASURES

**Flash point:** -17.78 °C (0°F) no method

**Autoignition temperature:** Not available

**Flammable/Explosive limits - lower:** 1 %

**Flammable/Explosive limits - upper:** 6.5 %

**Extinguishing media:** Foam, dry chemical or carbon dioxide. In case of fire, keep containers cool with water spray.

**Special firefighting procedures:** Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.

**Unusual fire or explosion hazards:** Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel along floor to an ignition source.

**Hazardous combustion products:** Carbon dioxide. Carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Environmental precautions:** Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Ventilate area.

**Clean-up methods:** Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear suitable protective clothing, gloves and eye/face protection.
7. HANDLING AND STORAGE

Handling: Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers. Use only in well-ventilated areas. Keep out of the reach of children.

Storage: Keep away from heat, spark and flame. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>None</td>
<td>200 ppm TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Toluene</td>
<td>20 ppm TWA</td>
<td>300 ppm Ceiling</td>
<td>500 ppm MAX. CONC 10 minutes</td>
<td>None</td>
</tr>
<tr>
<td>Distillates, petroleum, steam-cracked, polymd.</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>(SKIN) 50 ppm TWA</td>
<td>500 ppm (1,800 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Ethanol</td>
<td>1,000 ppm STEL</td>
<td>1,000 ppm (1,900 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>5 mg/m3 TWA mist 10 mg/m3 STEL mist</td>
<td>5 mg/m3 TWA mist</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10 mg/m3 TWA</td>
<td>15 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. When workplace hazards warrant the use of a respirator, appropriate respirators must be used, and a program that follows 29 CFR 1910.134 must be followed.

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state: pasty
- Color: beige
- Odor: slightly, mineral-oil-like
- Odor threshold: Not available
- pH: not applicable
- Vapor pressure: 155 mm hg (20 °C (68°F))
- Boiling point/range: 71.0 - 110.0 °C (159.8 - 230°F) (solvent)
- Melting point/range: Not available
- Specific gravity: 1.101
- Vapor density: Heavier than air
- Flash point: -17.78 °C (0°F) no method

IDH number: 1390593 1390933
Product name: Loctite PL Landscape Block Adhesive
Flammable/Explosive limits - lower: 1 %
Flammable/Explosive limits - upper: 6.5 %
Autoignition temperature: Not available
Evaporation rate: 4.8 (Butyl acetate = 1)
Solubility in water: Insoluble
Partition coefficient (n-octanol/water): Not available
VOC content: 32 %; 370 g/l (calculated)

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Will not occur.
Hazardous decomposition products: Carbon dioxide, carbon monoxide and irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.
Incompatible materials: Strong oxidizing agents.
Conditions to avoid: Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Toluene</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Distillates, petroleum, steam-cracked, polymd.</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Ethanol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Hazardous components</th>
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</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>Irritant</td>
</tr>
<tr>
<td>Toluene</td>
<td>Behavioral, Cardiac, Central nervous system, Developmental, Ear, Irritant</td>
</tr>
<tr>
<td>Distillates, petroleum, steam-cracked, polymd.</td>
<td>Irritant</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>Developmental, Irritant, Lung, Nervous System, Reproductive</td>
</tr>
<tr>
<td>Ethanol</td>
<td>Irritant, Central nervous system</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>Irritant</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Irritant, Respiratory, Some evidence of carcinogenicity</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR)
- Proper shipping name: Adhesives
- Hazard class or division: 3
- Identification number: UN 1133
- Packing group: III
- DOT Reportable quantity: Toluene
- Exceptions: Consumer Commodity ORM-D (Not more than 5 L)

International Air Transportation (ICAO/IATA)
- Proper shipping name: Adhesives
- Hazard class or division: 3
- Identification number: UN 1133
- Packing group: III
- Exceptions: Consumer Commodity, ID 8000, Class 9, (Not more than 5 L)

Water Transportation (IMO/IMDG)
- Proper shipping name: ADHESIVES (Solvent naphtha)
- Hazard class or division: 3
- Identification number: UN 1133
- Packing group: III
- Marine pollutant: Solvent naphtha
- Exceptions: Limited quantity (Not more than 5 L).

15. REGULATORY INFORMATION

United States Regulatory Information
- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12(b) Export Notification: None above reporting de minimus
- CERCLA/SARA Section 302 EHS: None above reporting de minimus
- CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire
- CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Toluene (CAS# 108-88-3), n-Hexane (CAS# 110-54-3).
- California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information
- CEPA DSL/NDSL Status: Not applicable.
16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL Landscape Block Adhesive VOC
IDH number: 1390592 1390931
Product type: Assembly adhesive, solvent
Company address: Contact information:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067
Telephone: 800.624.7767
Transportation Emergency Telephone: 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: pasty
Color: beige
Odor: slightly, mineral-oil-like
HEALTH: 2
FLAMMABILITY: 3
PHYSICAL HAZARD: 0
DANGER: EXTREMELY FLAMMABLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FLASH FIRE.
HARMFUL IF SWALLOWED OR INHALED.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects

Inhalation: Irritates the nose, throat and respiratory system. Exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effects in the liver, kidneys, and lungs. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

Eye contact: Contact with eyes can cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: Eye, skin and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>79-20-9</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Xylenes</td>
<td>1330-20-7</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: If inhaled, immediately remove the affected person to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

Skin contact: Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing.

Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion: Do not induce vomiting, seek medical advice immediately.

5. FIRE FIGHTING MEASURES

Flash point: -12.78 °C (9°F) no method

Autoignition temperature: Not available

Flammable/Explosive limits - lower: 1 %

Flammable/Explosive limits - upper: 6.5 %

Extinguishing media: Foam, dry chemical or carbon dioxide. In case of fire, keep containers cool with water spray.

Special firefighting procedures: Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.

Unusual fire or explosion hazards: Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel along floor to an ignition source.

Hazardous combustion products: Carbon dioxide. Carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Ventilate area.

Clean-up methods: Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear suitable protective clothing, gloves and eye/face protection.
7. HANDLING AND STORAGE

Handling: Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers. Use only in well-ventilated areas. Keep out of the reach of children.

Storage: Keep away from heat, spark and flame. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>200 ppm TWA 250 ppm STEL</td>
<td>200 ppm (610 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Acetone</td>
<td>500 ppm TWA 750 ppm STEL</td>
<td>1,000 ppm (2,400 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Xylenes</td>
<td>100 ppm TWA 150 ppm STEL</td>
<td>100 ppm (435 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100 ppm TWA 125 ppm STEL</td>
<td>100 ppm (435 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10 mg/m3 TWA</td>
<td>15 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. When workplace hazards warrant the use of a respirator, appropriate respirators must be used, and a program that follows 29 CFR 1910.134 must be followed.

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: pasty
Color: beige
Odor: slightly, mineral-oil-like
Odor threshold: Not available
pH: not applicable
Vapor pressure: 155 mm hg (20 °C (68°F))
Boiling point/range: 57.2 - 115.6 °C (135°F - 240.1 °F) (solvent)
Melting point/ range: Not available
Specific gravity: 1.2948
Vapor density: Heavier than air
Flash point: -12.78 °C (9°F) no method
Flammable/Explosive limits - lower: 1 %
Flammable/Explosive limits - upper: 6.5 %
Autoignition temperature: Not available
Evaporation rate: 5.50 (Butyl acetate = 1)
Solubility in water: Insoluble
Partition coefficient (n-octanol/water): Not available
VOC content: < 3.00 %; < 50.00 g/l (calculated)

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Will not occur.
Hazardous decomposition products: Carbon dioxide, carbon monoxide and irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.
Incompatible materials: Strong oxidizing agents.
Conditions to avoid: Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Acetone</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Xylenes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>Blood, Central nervous system, Eyes, Irritant</td>
</tr>
<tr>
<td>Acetone</td>
<td>Blood, Central nervous system, Irritant, Reproductive</td>
</tr>
<tr>
<td>Xylenes</td>
<td>Cardiac, Central nervous system, Irritant, Kidney, Liver</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>Irritant, Central nervous system</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Irritant, Respiratory, Some evidence of carcinogenicity</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

**U.S. Department of Transportation Ground (49 CFR)**

- **Proper shipping name:** Adhesives
- **Hazard class or division:** 3
- **Identification number:** UN 1133
- **Packing group:** III
- **DOT Reportable quantity:** Xylene (mixed)
- **Exceptions:** Consumer Commodity ORM-D (Not more than 5 L)

**International Air Transportation (ICAO/IATA)**

- **Proper shipping name:** Adhesives
- **Hazard class or division:** 3
- **Identification number:** UN 1133
- **Packing group:** III
- **Exceptions:** Consumer Commodity, ID 8000, Class 9, (Not more than 5 L)

**Water Transportation (IMO/IMDG)**

- **Proper shipping name:** ADHESIVES
- **Hazard class or division:** 3
- **Identification number:** UN 1133
- **Packing group:** III
- **Exceptions:** Limited quantity (Not more than 5 L).

15. REGULATORY INFORMATION

**United States Regulatory Information**

- **TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act inventory.
- **TSCA 12(b) Export Notification:** Methyl acetate (CAS# 79-20-9). Xylenes (CAS# 1330-20-7).
- **CERCLA/SARA Section 302 EHS:** None above reporting de minimus
- **CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health, Fire
- **CERCLA/SARA 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Xylenes (CAS# 1330-20-7). Ethylbenzene (CAS# 100-41-4).
- **California Proposition 65:** This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**Canada Regulatory Information**

- **CEPA DSL/NDSL Status:** Not applicable
16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL400 Subfloor & Deck Adhesive
IDH number: 1390036 1390597
Product type: Assembly adhesive, solvent

Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

2. HAZARDS IDENTIFICATION

Emergency Overview

Physical state: pasty
Color: beige
Odor: slightly, mineral-oil-like

HMIS:
HEALTH: 2
FLAMMABILITY: 3
PHYSICAL HAZARD: 0

Personal Protection: See MSDS Section 8

DANGER: EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects

Inhalation: Irritates the nose, throat and respiratory system. Exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effects in the liver, kidneys, and lungs. Overexposure to hexane may result in peripheral and central nervous system damage, which may be permanent. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

Eye contact: Contact with eyes can cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: Eye, skin and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.
### 3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>64741-84-0</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Distillates, petroleum, steam-cracked, polymd.</td>
<td>68131-77-1</td>
<td>5 - 10</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**Inhalation:**
If inhaled, immediately remove the affected person to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

**Skin contact:**
Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing.

**Eye contact:**
In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

**Ingestion:**
Do not induce vomiting, seek medical advice immediately.

### 5. FIRE FIGHTING MEASURES

**Flash point:**
-17.78 °C (0°F) no method

**Autoignition temperature:**
Not available

**Flammable/Explosive limits - lower:**
1 %

**Flammable/Explosive limits - upper:**
6.5 %

**Extinguishing media:**
Foam, dry chemical or carbon dioxide. In case of fire, keep containers cool with water spray.

**Special firefighting procedures:**
Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.

**Unusual fire or explosion hazards:**
Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel along floor to an ignition source.

**Hazardous combustion products:**
Carbon dioxide. Carbon monoxide.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Environmental precautions:**
Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Ventilate area.

**Clean-up methods:**
Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear suitable protective clothing, gloves and eye/face protection.
7. HANDLING AND STORAGE

Handling: Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers. Use only in well-ventilated areas. Keep out of the reach of children.

Storage: Keep away from heat, spark and flame. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Toluene</td>
<td>20 ppm TWA</td>
<td>200 ppm TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Distillates, petroleum, steam-cracked, polymd.</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>(SKIN) 50 ppm TWA</td>
<td>500 ppm (1,800 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Ethanol</td>
<td>1,000 ppm STEL</td>
<td>1,000 ppm (1,900 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>5 mg/m3 TWA mist 10 mg/m3 STEL mist</td>
<td>5 mg/m3 TWA mist</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10 mg/m3 TWA</td>
<td>15 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. When workplace hazards warrant the use of a respirator, appropriate respirators must be used, and a program that follows 29 CFR 1910.134 must be followed.

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: pasty
Color: beige
Odor: slightly, mineral-oil-like
Odor threshold: Not available
pH: not applicable
Vapor pressure: 155 mm hg (20 °C (68°F))
Boiling point/range: 71.0 - 110.0 °C (159.8 - 230°F) (solvent)
Melting point/range: Not available
Specific gravity: 1.101
Vapor density: Heavier than air
Flash point: -17.78 °C (0°F) no method
10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: Will not occur.

Hazardous decomposition products: Carbon dioxide, carbon monoxide and irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

Incompatible materials: Strong oxidizing agents.

Conditions to avoid: Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Toluene</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Distillates, petroleum, steam-cracked, polymd.</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Ethanol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>Irritant</td>
</tr>
<tr>
<td>Toluene</td>
<td>Behavioral, Cardiac, Central nervous system, Developmental, Ear, Irritant</td>
</tr>
<tr>
<td>Distillates, petroleum, steam-cracked, polymd.</td>
<td>Irritant</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>Developmental, Irritant, Lung, Nervous System, Reproductive</td>
</tr>
<tr>
<td>Ethanol</td>
<td>Irritant, Central nervous system</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>Irritant</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Irritant, Respiratory, Some evidence of carcinogenicity</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR)

- Proper shipping name: Adhesives
- Hazard class or division: 3
- Identification number: UN 1133
- Packing group: III
- DOT Reportable quantity: Toluene
- Exceptions: Consumer Commodity ORM-D (Not more than 5 L)

International Air Transportation (ICAO/IATA)

- Proper shipping name: Adhesives
- Hazard class or division: 3
- Identification number: UN 1133
- Packing group: III
- Exceptions: Consumer Commodity, ID 8000, Class 9, (Not more than 5 L)

Water Transportation (IMO/IMDG)

- Proper shipping name: ADHESIVES (Solvent naphtha)
- Hazard class or division: 3
- Identification number: UN 1133
- Packing group: III
- Marine pollutant: Solvent naphtha
- Exceptions: Limited quantity (Not more than 5 L).

15. REGULATORY INFORMATION

United States Regulatory Information

- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12(b) Export Notification: None above reporting de minimus
- CERCLA/SARA Section 302 EHS: None above reporting de minimus
- CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire
- CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Toluene (CAS# 108-88-3). n-Hexane (CAS# 110-54-3).
- California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

- CEPA DSL/NDSL Status: Not applicable.
16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation’s products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation’s products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL400 Subfloor & Decl Adhesive VOC
IDH number: 1390596 1390598
Product type: Assembly adhesive, solvent

Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

 hesitation:

2. HAZARDS IDENTIFICATION

HMIS:
Physical state: pasty HEALTH: 2
Color: beige FLAMMABILITY: 3
Odor: slightly, mineral-oil-like PHYSICAL HAZARD: 0

DANGER: EXTREMELY FLAMMABLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FLASH FIRE.
HARMFUL IF SWALLOWED OR INHALED.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects:

Inhalation: Irritates the nose, throat and respiratory system. Exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effects in the liver, kidneys, and lungs. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

Eye contact: Contact with eyes can cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: Eye, skin and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>79-20-9</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Xylenes</td>
<td>1330-20-7</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: If inhaled, immediately remove the affected person to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

Skin contact: Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing.

Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion: Do not induce vomiting, seek medical advice immediately.

5. FIRE FIGHTING MEASURES

Flash point: -12.78 °C (9°F) no method

Autoignition temperature: Not available

Flammable/Explosive limits - lower: 1 %

Flammable/Explosive limits - upper: 6.5 %

Extinguishing media: Foam, dry chemical or carbon dioxide. In case of fire, keep containers cool with water spray.

Special firefighting procedures: Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.

Unusual fire or explosion hazards: Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel along floor to an ignition source.

Hazardous combustion products: Carbon dioxide. Carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Ventilate area.

Clean-up methods: Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear suitable protective clothing, gloves and eye/face protection.
7. HANDLING AND STORAGE

Handling: Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers. Use only in well-ventilated areas. Keep out of the reach of children.

Storage: Keep away from heat, spark and flame. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>200 ppm TWA 250 ppm STEL</td>
<td>200 ppm (610 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Acetone</td>
<td>500 ppm TWA 750 ppm STEL</td>
<td>1,000 ppm (2,400 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Xylenes</td>
<td>100 ppm TWA 150 ppm STEL</td>
<td>100 ppm (435 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100 ppm TWA 125 ppm STEL</td>
<td>100 ppm (435 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10 mg/m3 TWA</td>
<td>15 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. When workplace hazards warrant the use of a respirator, appropriate respirators must be used, and a program that follows 29 CFR 1910.134 must be followed.

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: pasty
Color: beige
Odor: slightly, mineral-oil-like
Odor threshold: Not available
pH: not applicable
Vapor pressure: 155 mm hg (20 °C (68°F))
Boiling point/range: 57.2 - 115.6 °C (135°F - 240.1 °F) (solvent)
Melting point/ range: Not available
Specific gravity: 1.2948
Vapor density: Heavier than air
Flash point: -12.78 °C (9°F) no method
Flammable/Explosive limits - lower: 1 %
Flammable/Explosive limits - upper: 6.5 %
Autoignition temperature: Not available
Evaporation rate: 5.50 (Butyl acetate = 1)
Solubility in water: Insoluble

IDH number: 1390596 1390598  Product name: Loctite PL400 Subfloor & Decl Adhesive VOC
Partition coefficient (n-octanol/water): Not available
VOC content: < 3.00 %; < 50.00 g/l (calculated)

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Will not occur.
Hazardous decomposition products: Carbon dioxide, carbon monoxide and irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.
Incompatible materials: Strong oxidizing agents.
Conditions to avoid: Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Acetone</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Xylenes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl acetate</td>
<td>Blood, Central nervous system, Eyes, Irritant</td>
</tr>
<tr>
<td>Acetone</td>
<td>Blood, Central nervous system, Irritant, Reproductive</td>
</tr>
<tr>
<td>Xylenes</td>
<td>Cardiac, Central nervous system, Irritant, Kidney, Liver</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>Irritant, Central nervous system</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Irritant, Respiratory, Some evidence of carcinogenicity</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Adhesives
Hazard class or division: 3
Identification number: UN 1133
Packing group: III
DOT Reportable quantity: Xylene (mixed)
Exceptions: Consumer Commodity ORM-D (Not more than 5 L)

International Air Transportation (ICAO/IATA)

Proper shipping name: Adhesives
Hazard class or division: 3
Identification number: UN 1133
Packing group: III
Exceptions: Consumer Commodity, ID 8000, Class 9, (Not more than 5 L)

Water Transportation (IMO/IMDG)

Proper shipping name: ADHESIVES
Hazard class or division: 3
Identification number: UN 1133
Packing group: III
Exceptions: Limited quantity (Not more than 5 L).

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act inventory.
TSCA 12(b) Export Notification: Methyl acetate (CAS# 79-20-9). Xylenes (CAS# 1330-20-7).
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Xylenes (CAS# 1330-20-7). Ethylbenzene (CAS# 100-41-4).
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: Not applicable
16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation’s products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation’s products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Power Grab Tub Surround Construction Adhesive
IDH number: 1363138
Product type: Adhesive
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Pasty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Grey</td>
</tr>
<tr>
<td>Odor:</td>
<td>Mild</td>
</tr>
<tr>
<td>HEALTH:</td>
<td>1</td>
</tr>
<tr>
<td>FLAMMABILITY:</td>
<td>0</td>
</tr>
<tr>
<td>PHYSICAL HAZARD:</td>
<td>0</td>
</tr>
<tr>
<td>Personal Protection:</td>
<td>Not available</td>
</tr>
</tbody>
</table>

CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.

Relevant routes of exposure: Ingestion, Skin

Potential Health Effects

- **Inhalation:** Not a relevant route of exposure.
- **Skin contact:** Prolonged and/or repeated skin contact with this product may cause irritation.
- **Eye contact:** May cause irritation.
- **Ingestion:** Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: None known

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxydiethylene dibenzoate</td>
<td>120-55-8</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

- **Inhalation:** Move to fresh air. If symptoms persist, seek medical advice.
- **Skin contact:** Wash with soap and water. If symptoms develop and persist, get medical attention.
- **Eye contact:** Flush eyes with plenty of water for at least 5 minutes. If irritation persists seek medical attention.
- **Ingestion:** Do not induce vomiting. Seek medical advice.
5. FIRE FIGHTING MEASURES

Flash point: not applicable
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: carbon dioxide, foam, powder, water spray jet, fine water spray
Special firefighting procedures: Not available
Unusual fire or explosion hazards: None known
Hazardous combustion products: Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: None known
Clean-up methods: Scrape up as much material as possible. Clean residue with soap and water.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes. Avoid prolonged or repeated skin contact with this material. Do not taste or swallow. Keep out of the reach of children.

Storage: Protect from freezing. Store in a cool, dry area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxydiethylene dibenzoate</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10 mg/m3 TWA</td>
<td>15 mg/m3 TWA</td>
<td>Total dust.</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Not normally needed.
Respiratory protection: No personal respiratory protective equipment normally required.
Eye/face protection: No special measures required if used properly.
Skin protection: No special measures required if used properly.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: pasty
Color: Grey
Odor: Mild
Odor threshold: Not available
pH: 8 - 9
Vapor pressure: Not available
Boiling point/range: Not available
Melting point/range: Not available
**Specific gravity:** 1.25 - 1.35 (Water = 1)
**Vapor density:** 0.62 (Air = 1)
**Flash point:** not applicable
**Flammable/Explosive limits - lower:** Not available
**Flammable/Explosive limits - upper:** Not available
**Autoignition temperature:** Not available
**Evaporation rate:** 1 (Water = 1)
**Solubility in water:** emulsifiable
**Partition coefficient (n-octanol/water):** Not available
**VOC content:** < 2.00 % (calculated)
**Viscosity:** <= 1,000,000 mPa.s

### 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal conditions of storage and use.
**Hazardous reactions:** Will not occur.
**Hazardous decomposition products:** None known
**Incompatible materials:** Strong acids and oxidizing agents.
**Conditions to avoid:** None known

### 11. TOXICOLOGICAL INFORMATION

**Product toxicity data:** The toxicological profile of the formulation was evaluated based upon the data of the ingredients.

- **Acute oral product toxicity:** LD50 (rat) > 5 g/kg (Estimated)
- **Acute dermal product toxicity:** LD50 (rat) > 2 g/kg (Estimated)
- **Acute inhalation product toxicity:** Due to the low volatility of the product there are no hazards associated with inhalation under normal conditions of use

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxydiethylene dibenzoate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxydiethylene dibenzoate</td>
<td>No Target Organs</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Irritant, Respiratory, Some evidence of carcinogenicity</td>
</tr>
</tbody>
</table>

### 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

International Air Transportation (ICAO/IATA)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

Water Transportation (IMO/IMDG)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information
- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12(b) Export Notification: None above reporting de minimus
- CERCLA/SARA Section 302 EHS: None above reporting de minimus
- CERCLA/SARA Section 311/312: None
- CERCLA/SARA 313: None above reporting de minimus
- California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information
- CEPA DSL/NDSL Status: Not applicable.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
SECTION 1 - PRODUCT INFORMATION

DATE OF PREPARATION 5/25/10

TRADE NAME........... Loctite Latex Contact Cement
PHYSICAL FORM: WATER

MANUFACTURER CODE ID: 1371270

SECTION 2 - HAZARDOUS INGREDIENTS/COMPOSITION INFORMATION

ALLOWABLE SARA VP
INGREDIENT % BY CAS NO. EXPOSURE LEVEL 313 mm Hg @ 
PPM MG/CU.M. SKIN 20 DEG.C

BUTYLATED P-CRESOL < 5 68610-51-5 NONE ESTABLISHED
DICYLOPENTADIENE

ZINC OXIDE < 5 1314-13-2 TLV-TWA 2 RESP X
TLV-STEL 10 RESP
OSHA-PEL 10

SKIN = SKIN ABSORPTION MUST BE CONSIDERED AS A ROUTE OF EXPOSURE
C-CEILING= ALLOW. EXPOSURE LEVEL SHOULD NOT BE EXCEEDED FOR ANY TIME PERIOD
MFR = MANUFACTURER RECOMMENDED EXPOSURE LIMIT
STEL = SHORT TERM EXPOSURE LIMIT
X-SARA 313 = CHEMICAL IS SUBJECT TO REPORTING REQUIREMENTS OF SECTION 313
OF TITLE III OF S.A.R.A. 40 CFR PART 372

SECTION 3 - HAZARDS IDENTIFICATION

EFFECTS OF SHORT TERM OVEREXPOSURE
SWALLOWING
Unknown
INHALATION
May cause respiratory irritation.
EYE
May cause eye irritation.
SKIN
May cause skin irritation.

EFFECTS OF REPEATED OVEREXPOSURE
None currently known

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH.
None currently known

SECTION 4 - FIRST-AID MEASURES

SWALLOWING
If swallowed call Poison Control Center, Hospital Emergency Room, or
Physician immediately.

INHALATION
Remove to fresh air. Get medical attention.
SECTION 4 - FIRST-AID MEASURES (Continued)

EYE
Flush with large amounts of water, lifting upper and lower lids occasionally. Continue for at least 15 minutes. Get medical attention immediately.

SKIN
Remove contaminated clothing. Wash affected area with soap and water. Obtain medical attention if irritation persists.

NOTES TO PHYSICIAN
Any treatment that might be required for overexposure should be directed at the control of symptoms and the clinical conditions.

SECTION 5 - FIRE-FIGHTING MEASURES

NFPA FLAMMABILITY CLASSIFICATION Not Applicable

FLASHPOINT Not applicable

EXTINGUISHING MEDIA
Will not burn.

UNUSUAL FIRE AND EXPLOSION HAZARDS
None known.

SPECIAL FIRE FIGHTING PROCEDURES
None known

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED
Confine in small area; use absorbent to clean up. Place in container for disposal.

WASTE DISPOSAL
Dispose in accordance with federal, state and local regulations.

ENVIRONMENTAL HAZARDS
None known

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Protect from freezing.

OTHER PRECAUTIONS
Do not take internally. Close container after each use. Avoid skin contact. Keep away from children.

SECTION 8 - EXPOSURE CONTROLS

RESPIRATORY PROTECTION
Proper selection of respiratory protection depends upon many factors including duration and level of exposure and conditions of use. In general exposure to organic chemicals such as those contained in this product may not require the use of respiratory protection if used in well ventilated areas. In areas of restricted ventilation a NIOSH approved organic vapor respirator may be required. Under certain conditions, such as spraying, a mechanical prefilter may also be required. In confined areas or in high exposure situations a NIOSH/MSHA approved air supplied respirator may be required. If the TLV’s or PEL’s listed in Section II are exceeded use a properly fitted NIOSH/MSHA approved respirator with an appropriate protection factor. Refer to OSHA 29 CFR 1910.134 “Respiratory Protection”, and “Respiratory Protection a Manual and Guideline, American Industrial Hygiene Association”.

VENTILATION
Provide general dilution and local exhaust ventilation in sufficient volume and pattern to keep concentrations of hazardous ingredients listed in Section II below the lowest exposure limit stated. Remove decomposition products that are generated when welding, cutting, or brazing objects coated with this product. Refer to “Industrial Ventilation – A Manual of Recommended Practice ” ACGIH.
SECTION 8 - EXPOSURE CONTROLS (Continued)

HAND PROTECTION
Not likely to be needed.

EYE PROTECTION
Wear safety spectacles with side shields. Wear face shield as necessary when spraying.

OTHER PROTECTIVE EQUIPMENT
Eyewash facility, safety shower.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE 212 DEG.F. (100 DEG.C.) TO 234 DEG.F.(112 DEG.C.)

VAPOR DENSITY Heavier than air. % VOLATILE BY VOLUME 47

EVAPORATION RATE VOC .04 lb/gal less water* NPRS* 5 g/l less water CALCULATED
Slower than diethyl ether.

WEIGHT LB./GAL. 9.2 VOC .04 lb/gal solids 5 g/l solids CALCULATED

SPECIFIC GRAVITY 1.1

All Physical data determined at 68 DEG. F. (20 DEG. C.) 760 mm Hg
* Negligibly Photochemically Reactive Materials

SECTION 10 - STABILITY AND REACTIVITY

STABILITY
Normally stable.

CONDITIONS TO AVOID
None known

INCOMPATABILITY (MATERIALS TO AVOID)
None known

HAZARDOUS DECOMPOSITION PRODUCTS
Burning, including when heated by welding or cutting, will produce smoke, carbon monoxide and carbon dioxide. In addition, oxides of zinc may be generated.

Welding, brazing, or torch cutting materials coated with this product may produce metal oxides. Overexposure to these metal oxides may result in "Metal Fume Fever". Symptoms include a flu-like illness with fever, chills, and cough. An air purifying or supplied air respirator may be required depending upon levels of exposure. Consult a qualified health and safety professional.

HAZARDOUS POLYMERIZATION
Will not occur

CONDITIONS TO AVOID
None known

SECTION 11 - TOXICOLOGICAL INFORMATION

No information available.

SECTION 12 - ECOLOGICAL INFORMATION

No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

See Section 6.

SECTION 14 - TRANSPORT INFORMATION

MODE PROPER SHIPPING NAME CLASS I.D.# PKG GRP NAERG: 3-05
IATA (AIR) ADHESIVES, NOT REGULATED
DOT (HM-181) ADHESIVES, NOT REGULATED
DOMESTIC SURFACE ADHESIVES, NOT REGULATED
IMDG CODE ADHESIVES, NOT REGULATED
NOTE! The assignment of Proper Shipping Names is in part a function of the
type of the product container and the transport mode. For example, the
Proper Shipping Name for a bulk package and the policies established by some transporters, require that the shipper
properly classify and assign a Proper Shipping Name, and label, mark and
package the material properly. Therefore, the user of this information is
cautions to consult with applicable regulations, and with qualified
advisors prior to the repackaging and or reshipment of this or other any
product which contain this product.

SECTION 15 - REGULATORY INFORMATION

All ingredients in this product are listed on the US TSCA Inventory.

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>CAS NO.</th>
<th>DETAIL INVENTORY LIST INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYLATED P-CRESOL</td>
<td>68610-51-5</td>
<td>DSL</td>
</tr>
<tr>
<td>DICYPENTADIENE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZINC OXIDE</td>
<td>1314-13-2</td>
<td>DSL</td>
</tr>
</tbody>
</table>

DETAIL INVENTORY LIST DESCRIPTION

DSL/Canadian Domestic Substance List

SECTION 16 - OTHER INFORMATION

DISCLAIMER: The data contained herein are furnished for information only
and are believed to be reliable. However, Henkel Corporation does not
assume responsibility for any results obtained by persons over whose
methods Henkel Corporation has no control. It is the user's responsibility
to determine the suitability of Henkel's products or any production methods
mentioned herein for a particular purpose, and to adopt such precautions as
may be advisable for the protection of property and persons against any
hazards that may be involved in the handling and use of any of Henkel
Corporation's products. In light of the foregoing, Henkel Corporation
specifically disclaims all warranties, express or implied, including
warranties of merchantability and fitness for a particular purpose, arising
from sale or use of Henkel Corporation's products. Henkel Corporation
further disclaims any liability for consequential or incidental damages of
any kind, including lost profits.

==========================================================================
1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name:</th>
<th>Loctite General Purpose Spray Adhesive</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDH number:</td>
<td>1408027</td>
</tr>
<tr>
<td>Company address:</td>
<td>Henkel Corporation</td>
</tr>
<tr>
<td></td>
<td>One Henkel Way</td>
</tr>
<tr>
<td></td>
<td>Rocky Hill, Connecticut 06067</td>
</tr>
</tbody>
</table>

2. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Sprayable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>white</td>
</tr>
<tr>
<td>Odor:</td>
<td>of solvent</td>
</tr>
</tbody>
</table>

**HMIS:**

- **HEALTH:** 1
- **FLAMMABILITY:** 4
- **PHYSICAL HAZARD:** 0
- **Personal Protection:** Not available

**DANGER:**

- EXTREMELY FLAMMABLE.
- VAPOR MAY CAUSE FLASH FIRE.
- VAPOR HARMFUL.
- CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

**Relevant routes of exposure:** Skin, Eyes

**Potential Health Effects**

- **Inhalation:** Vapors are irritating to the nose, throat and respiratory tract resulting in dryness of throat and tightness in chest. Other symptoms of overexposure include headache, nausea, narcosis, fatigue and loss of appetite.
- **Skin contact:** Repeated exposure may cause skin dryness or cracking. Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis. Prolonged or repeated skin contact may result in redness, burning sensation or dermatitis. Prolonged and/or repeated skin contact may result in mild irritation or redness. Mild skin irritation.
- **Eye contact:** Direct spray or vapors will irritate and may harm eyes. Symptoms include: Stinging, Tearing, Redness.
- **Ingestion:** Not available

**Existing conditions aggravated by exposure:** Not available

*See Section 11 for additional toxicological information.*

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>10 - 30</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td>10 - 30</td>
</tr>
<tr>
<td>n-Butane, containing &gt;= 0.1 % butadiene</td>
<td>106-97-8</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**Inhalation:** Move to fresh air, consult doctor if complaint persists.
Skin contact: Wash with soap and water. Obtain medical attention if irritation persists.
Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion: Do not induce vomiting, seek medical advice immediately.

5. FIRE FIGHTING MEASURES

Flash point: Not available
Flame projection: 91.44 cm (36inch)
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Carbon dioxide. Foam. Dry powder.
Special firefighting procedures: In case of fire, keep containers cool with water spray. Wear protective equipment.
Unusual fire or explosion hazards: Not available
Hazardous combustion products: Not available

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.
Environmental precautions: Contain spill. Absorb spill with inert material. Shovel material into appropriate container for disposal.
Clean-up methods: Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

7. HANDLING AND STORAGE

Handling: Keep out of the reach of children. Use only in well-ventilated areas. Do not puncture the container. Do not handle or store near an open flame, heat or other sources of ignition. Product to be stored below 95º F.
Storage: For safe storage, store at or below 50.0 °C (122°F) Store in a cool, dry, well-ventilated area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>500 ppm TWA</td>
<td>1,000 ppm (2,400 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>750 ppm STEL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n-Hexane (SKIN)</td>
<td>50 ppm TWA</td>
<td>500 ppm (1,800 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Propane</td>
<td>1,000 ppm TWA</td>
<td>1,000 ppm (1,800 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>n-Butane, containing &gt;= 0,1 % butadiene</td>
<td>1,000 ppm TWA</td>
<td></td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

IDH number: 1408027
Product name: Loctite General Purpose Spray Adhesive

Page 2 of 5
Engineering controls: Use only in well ventilated areas.
Respiratory protection: No special measures required if used properly.
Eye/face protection: Protective goggles
Skin protection: Protective clothing that covers arms and legs.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Sprayable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>white</td>
</tr>
<tr>
<td>Odor:</td>
<td>of solvent</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not available</td>
</tr>
<tr>
<td>pH:</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>None identified</td>
</tr>
<tr>
<td>Boiling point/range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point/ range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>0.6350</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flame projection:</td>
<td>91.44 cm (36inch)</td>
</tr>
<tr>
<td>Flammable/Explosive limits - lower:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable/Explosive limits - upper:</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature:</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>&gt; 1.00 (Butyl acetate = 1)</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>insoluble in water</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC content:</td>
<td>64.96 %</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability: Not available
Hazardous reactions: Will not occur.
Hazardous decomposition products: Carbon dioxide, carbon monoxide, Hydrocarbons
Incompatible materials: Strong oxidizing agents.
Conditions to avoid: Temperatures over appr. 50 °C

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Propane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>n-Butane, containing &gt;= 0,1 % butadiene</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>Blood, Central nervous system, Irritant, Reproductive</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>Developmental, Irritant, Lung, Nervous System, Reproductive</td>
</tr>
<tr>
<td>Propane</td>
<td>Cardiac, Central nervous system, Irritant</td>
</tr>
<tr>
<td>n-Butane, containing &gt;= 0,1 % butadiene</td>
<td>Cardiac, Central nervous system, Irritant</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of waste and residues in accordance with local authority requirements. List in National Hazardous Waste Catalogue.

Hazardous waste number: Not available

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Aerosols
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Exception: Consumer Commodity ORM-D

International Air Transportation (ICAO/IATA)

Proper shipping name: Aerosols, flammable
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: AEROSOLS (Hexane)
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None

Marine pollutant: Hexane

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: One or more components of this product are not listed on the U.S. Toxic Substances Control Act (TSCA) inventory. As such, this product may only be used for research and development purposes as described in 40 CFR 720.36. All other components of this product are listed or are exempt from listing.

TSCA 12(b) Export Notification: None above reporting de minimus

CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Not available
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). n-Hexane (CAS# 110-54-3).

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Karim Nasr, Regulatory Affairs Specialist
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation’s products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite High Performance Spray Adhesive  
IDH number: 1408028  
Product type: Adhesive  
Company address:  
Henkel Corporation  
One Henkel Way  
Rocky Hill, Connecticut 06067  
Region: United States  
Contact information:  
Telephone: 800.624.7767  
For Chemical Emergency: Call CHEMTREC at 800.424.9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: liquid  
Color: Whitish  
Odor: Solvent  
HEALTH: 1  
FLAMMABILITY: 4  
PHYSICAL HAZARD: 0  
Personal Protection: Not available  

DANGER: EXTREMELY FLAMMABLE.
VAPOR MAY CAUSE FLASH FIRE.
HARMFUL OR FATAL IF SWALLOWED.
HARMFUL IF INHALED.

Relevant routes of exposure: Skin, Eyes, Inhalation

Potential Health Effects:

Inhalation: May cause respiratory tract irritation. Vapours may cause drowsiness and dizziness.
Skin contact: Prolonged or repeated contact with this product may dry and/or defat the skin. May cause irritation.
Eye contact: High vapor/aerosol concentrations may be irritating. Exposure to vapor may cause tearing of the eyes, irritation and burning sensation.
Ingestion: May be harmful if swallowed.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders. Existing conditions aggravated by exposure:

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Petroleum gases, liquified, sweetened</td>
<td>68476-86-8</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Pentane</td>
<td>109-66-0</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Not available
Skin contact: Immediately wash skin thoroughly with soap and water. Remove contaminated clothes.
Eye contact: Flush eyes with plenty of water for at least 5 minutes. If irritation persists seek medical attention.

Ingestion: Not available

5. FIRE FIGHTING MEASURES

Flash point: Not available
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Not available
Special firefighting procedures: Not available
Unusual fire or explosion hazards: Not available

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Absorb spill with inert material. Shovel material into appropriate container for disposal.

Clean-up methods: Follow all local, state, federal and provincial regulations for disposal.

7. HANDLING AND STORAGE

Handling: Avoid skin and eye contact. Keep out of the reach of children. Use only in well-ventilated areas. Avoid breathing vapors or mists of this product. Do not handle or store near an open flame, heat or other sources of ignition. Avoid all ignition sources in storing and handling this material. Keep cool in accordance with label instructions. Wear protective equipment when handling. Wash thoroughly after handling. Keep in a cool, well ventilated area. Do not puncture or incinerate pressurized containers.

Storage: For safe storage, store at or below 50.0 °C (122°F)

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV (SKIN)</th>
<th>OSHA PEL (mg/m3) TWA</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>50 ppm TWA</td>
<td>500 ppm (1,800 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Acetone</td>
<td>500 ppm TWA</td>
<td>1,000 ppm (2,400 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Petroleum gases, liquefied, sweetened</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Pentane</td>
<td>600 ppm TWA</td>
<td>1,000 ppm (2,950 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Provide adequate ventilation.
Respiratory protection: Suitable breathing mask when there is inadequate ventilation.
Eye/face protection: Wear protective glasses.
Skin protection: Wear protective equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state:</td>
<td>liquid</td>
</tr>
<tr>
<td>Color:</td>
<td>Whitish</td>
</tr>
<tr>
<td>Odor:</td>
<td>Solvent</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not available</td>
</tr>
<tr>
<td>pH:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point/range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point/ range:</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>0.7591</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable/Explosive limits - lower:</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable/Explosive limits - upper:</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature:</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>&gt; 1.00 (Butyl acetate = 1)</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC content:</td>
<td>63.87 %</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability:</td>
<td>Stable</td>
</tr>
<tr>
<td>Hazardous reactions:</td>
<td>Will not occur</td>
</tr>
<tr>
<td>Hazardous decomposition products:</td>
<td>Carbon dioxide. Hydrocarbons Carbon monoxide.</td>
</tr>
<tr>
<td>Incompatible materials:</td>
<td>Not available</td>
</tr>
<tr>
<td>Conditions to avoid:</td>
<td>Keep away from sources of ignition and naked flames.</td>
</tr>
</tbody>
</table>

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Acetone</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Petroleum gases, liquified, sweetened</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Pentane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>Developmental, Irritant, Lung, Nervous System, Reproductive</td>
</tr>
<tr>
<td>Acetone</td>
<td>Blood, Central nervous system, Irritant, Reproductive</td>
</tr>
<tr>
<td>Petroleum gases, liquified, sweetened</td>
<td>No Records</td>
</tr>
<tr>
<td>Pentane</td>
<td>Cardiac, Central nervous system, Irritant, Lung</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecological information:</td>
<td>Not available</td>
</tr>
</tbody>
</table>
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of waste and residues in accordance with local authority requirements.

Hazardous waste number: Not available

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Aerosols
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Exceptions: Consumer Commodity ORM-D

International Air Transportation (ICAO/IATA)

Proper shipping name: Aerosols, flammable
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: AEROSOLS (Pentane)
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Marine pollutant: Pentane

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: One or more components of this product are not listed on the U.S. Toxic Substances Control Act (TSCA) inventory. As such, this product may only be used for research and development purposes as described in 40 CFR 720.36. All other components of this product are listed or are exempt from listing.

TSCA 12(b) Export Notification: Pentane (CAS# 109-66-0).

CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Not available
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). n-Hexane (CAS# 110-54-3).

California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: KNaSr, Regulatory Affairs Specialist
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Professional Performance Spray Adhesive 
IDH number: 1418862
Product type: Adhesive
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

2. HAZARDS IDENTIFICATION

2.1 EMERGENCY OVERVIEW

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Off white</td>
</tr>
<tr>
<td>Odor:</td>
<td>Solvent</td>
</tr>
</tbody>
</table>

HMIS:
- HEALTH: 2
- FLAMMABILITY: 4
- PHYSICAL HAZARD: 0
- Personal Protection: Not available

DANGER: EXTREMELY FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF INHALED.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects
- Inhalation: May be harmful if inhaled.
- Skin contact: Prolonged and/or repeated skin contact may result in mild irritation or redness. Repeated or prolonged contact can result in drying of skin. Symptoms may include redness, burning, drying, cracking and skin burns.
- Eye contact: Symptoms can include irritation, redness, scratching of the cornea, and tearing. Mild eye irritation.
- Ingestion: May be harmful if swallowed.

Existing conditions aggravated by exposure: Other pre-existing skin conditions. Blood disorders.

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Methyl acetate</td>
<td>79-20-9</td>
<td>1 - 5</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>142-82-5</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td>30 - 60</td>
</tr>
<tr>
<td>n-Butane, containing &gt;= 0.1 % butadiene</td>
<td>106-97-8</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. In case of adverse health effects seek medical advice.
Skin contact: Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention. Remove contaminated clothes.

Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion: If material is ingested, immediately contact a physician or poison control center. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting.

Notes to physician: This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting.

5. FIRE FIGHTING MEASURES

Flash point: Not available
Autoignition temperature: Not available
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Extinguishing media: Carbon dioxide. Alcohol-resistant foam Dry powder.
Special firefighting procedures: Not available
Unusual fire or explosion hazards: Not available
Hazardous combustion products: Not available

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Not available
Clean-up methods: Absorb spill with inert material. Shovel material into appropriate container for disposal. Follow all local, state, federal and provincial regulations for disposal.

7. HANDLING AND STORAGE

Handling: Keep out of the reach of children. Keep in a cool, well ventilated area. Ventilate working rooms thoroughly. Avoid naked flames, sparking and sources of ignition. Switch off electrical devices. Do not smoke, do not weld. Do not empty waste into waste water drains. Avoid skin and eye contact. Avoid breathing vapors or mists of this product. Do not puncture or incinerate pressurized containers.

Storage: For safe storage, store at or below 50.0 °C (122°F). Store in a cool, dry, well-ventilated area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.
### 9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical state: | liquid |
| Color:         | Off white |
| Odor:          | Solvent |
| Odor threshold: | Not available |
| pH:            | Not applicable |
| Vapor pressure: | Not available |
| Boiling point/range: | Not available |
| Melting point/ range: | Not available |
| Specific gravity: | 0.8420 |
| Vapor density: | Not available |
| Flash point: | Not available |
| Flammable/Explosive limits - lower: | Not available |
| Flammable/Explosive limits - upper: | Not available |
| Autoignition temperature: | Not available |
| Evaporation rate: | Not available |
| Solubility in water: | insoluble in water |
| Partition coefficient (n-octanol/water): | Not available |
| VOC content: | 54.80 % |

### 10. STABILITY AND REACTIVITY

**Stability:** Not available

**Hazardous reactions:** Will not occur.

**Hazardous decomposition products:** Carbon dioxide. Carbon monoxide. Hydrocarbons.

**Incompatible materials:** Not available

**Conditions to avoid:** Heat, flames, sparks and other sources of ignition.
11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Methyl acetate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Toluene</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Propane</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>n-Butane, containing &gt;= 0.1 % butadiene</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>Blood, Central nervous system, Irritant, Reproductive</td>
</tr>
<tr>
<td>Methyl acetate</td>
<td>Blood, Central nervous system, Eyes, Irritant</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>Central nervous system, Irritant</td>
</tr>
<tr>
<td>Toluene</td>
<td>Behavioral, Cardiac, Central nervous system, Developmental, Ear, Irritant</td>
</tr>
<tr>
<td>Propane</td>
<td>Cardiac, Central nervous system, Irritant</td>
</tr>
<tr>
<td>n-Butane, containing &gt;= 0.1 % butadiene</td>
<td>Cardiac, Central nervous system, Irritant</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Recommended method of disposal: Dispose of waste and residues in accordance with local, state and Federal authority requirements.

Hazardous waste number: Not available

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)
- Proper shipping name: Aerosols
- Hazard class or division: 2.1
- Identification number: UN 1950
- Packing group: None
- Exceptions: Consumer Commodity ORM-D

International Air Transportation (ICAO/IATA)
- Proper shipping name: Aerosols, flammable
- Hazard class or division: 2.1
- Identification number: UN 1950
- Packing group: None

Water Transportation (IMO/IMDG)
- Proper shipping name: AEROSOLS (Heptanes)
- Hazard class or division: 2.1
- Identification number: UN 1950
- Packing group: None
- Marine pollutant: Heptanes

15. REGULATORY INFORMATION

United States Regulatory Information
- TSCA 8 (b) Inventory Status: One or more components of this product are not listed on the U.S. Toxic Substances Control Act (TSCA) inventory. As such, this product may only be used for research and development purposes as described in 40 CFR 720.36. All other components of this product are listed or are exempt from listing.
- TSCA 12(b) Export Notification: N-Heptane (CAS# 142-82-5). Methyl acetate (CAS# 79-20-9).
- CERCLA/SARA Section 302 EHS: None above reporting de minimus
- CERCLA/SARA Section 311/312: Not available
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Toluene (CAS# 108-88-3).

California Proposition 65: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: K Nasr, Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
MATERIAL SAFETY DATA SHEET

MSDS Name: PL(R) POLYURETHANE DOOR, WINDOW & SIDING SEALANT
MSDS Number: P73261125
Version Number: 2
Revision Date: OCT-13-2005
Page Number: 1

SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: PL(R) POLYURETHANE DOOR, WINDOW & SIDING SEALANT
HMIS Hazard Rating: Health: 1 Fire: 1 Reactivity: 0 PPE: G

Company Identification: HENKEL CONSUMER ADHESIVES
7405 PRODUCTION DRIVE
MENTOR OH 44060

Contact (24 hour): Customer Affairs (800) 321-0253
Information phone/Fax: (440) 255-8900 / (440) 974-8358
CHEMTREC Emergency (24 hour): (703) 527-3887 (International)
(800) 424-9300
in Canada CANUTEC 613-996-6666

Product Class URETHANE SEALANT
Trade Name PL-BRANDS
Product Code See NO. above

SECTION II - INGREDIENT AND HAZARD INFORMATION

<table>
<thead>
<tr>
<th>Hazardous Ingredient Name</th>
<th>CAS Number</th>
<th>Percent</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide **</td>
<td>13463-67-7</td>
<td>&lt; 5.0</td>
<td>Y</td>
</tr>
<tr>
<td>STODDARD SOLVENT</td>
<td>8052-41-3</td>
<td>&lt; 5.0</td>
<td>Y</td>
</tr>
<tr>
<td>SILICA, QUARTZ</td>
<td>14808-60-7</td>
<td>TRACE</td>
<td>Y</td>
</tr>
</tbody>
</table>

Ingredient Notes:
Remaining ingredients are not considered OSHA hazardous.
**The main hazard for Titanium Dioxide is dust inhalation. Because of its incorporation into the caulk, exposure by inhalation is unlikely.

SECTION III - PHYSICAL AND CHEMICAL PROPERTIES

Form: Non sag caulk.
Appearance/Color: Various
Odor: Mild, oily
Solubility (in water): insol.
PH Value, +/- .3: Not Applicable
Boiling Range: 250.0°F - 484.0°F (121.11°C - 251.11°C)
Vapor Pressure (mmHg): less than 4.0 @ 68.0°F (20.0°C)
Evaporation Rate: 0.1 times Slower than n-Butyl Acetate
Vapor Density: Heavier than air
% Volatile, Weight under 5.5%
% Volatile, Volume Not Available
Specific Gravity: 1.1805
VOC (less H2O or exempt) < 44 Gr/L, 3%

NOTE:
*BOIL RANGE, EVAP RATE, VAPOR PRESSURE AND DENSITY FOR SOLVENT ONLY!

SECTION IV - FIRE FIGHTING MEASURES (Flash,UEL,LEL for solvent only)
Flammability Class IIIB
Flash Range: 200.0°F (93.33°C)
Explosive Range (LEL/UEL): Not Available

EXTINGUISHING MEDIA:
Carbon Dioxide---Dry Chemical---Foam
Use water to cool material in vicinity of fire.

SPECIAL FIRE-FIGHTING PROCEDURES:
Use self-contained breathing apparatus with full facepiece operated in pressure demand or other positive pressure mode.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Water may be unsuitable except as a cooling agent.
Use fog nozzle. Any closed container may rupture when exposed to extreme heat.

SECTION V - HEALTH HAZARD DATA

ROUTES OF ENTRY:
ENTRY THROUGH...
Inhalation? Yes  |  Skin? Yes   |  Ingestion? Yes
TARGET ORGANS...
Overexposure -- Toluene Diisocyanate (<0.1%): Skin, Eyes
A known skin sensitizer

CARCINOGENICITY...
NTP? N/E  |  IARC Monographs? noted  |  OHSA? NO
Normal use of this product does not produce dust. Sanding dried material could generate trace amounts of Silica (quartz) which is a suspect human carcinogen by IARC.

EFFECTS OF OVEREXPOSURE
Eyes: Can cause irritation, redness, tearing and blurred vision.
Skin: Repeated contact can cause moderate irritation, dermatitis
and possible sensitivity. Allergic reactions are possible.

Inhalation: Headaches, dizziness, nausea, decreased blood pressure, irritation, coughing, chest discomfort. See Chronic below.

Ingestion: Can cause gastrointestinal irritation, nausea.

FIRST AID MEASURES

Eyes: Flush with large amounts of water for at least 15 minutes lifting eyelids occasionally; get prompt medical attention

Skin: Wash thoroughly with soap and water; apply a mild skin cream. Remove contaminated clothing. Rubbing alcohol may help to remove uncured adhesive.

Inhalation: Remove affected person to fresh air.

Ingestion: Get medical attention if ill effects develop.

CHRONIC HAZARDS

CHRONIC HAZARDS: Preexisting respiratory or skin conditions may be aggravated by exposure. This product contains an isocyanate. Skin and respiratory sensitization can result from repeated exposures to isocyanates. For most individuals these effects are reversible.

Persons previously sensitized to isocyanates may experience an allergic respiratory reaction: signs/symptoms can include difficulty breathing, wheezing, tightness of chest, and respiratory failure.

SILICA: Normal use of this product does not produce dust. Sanding dried material could generate trace amounts of Silica (quartz) which is a suspect human carcinogen (IARC Group 1).

Repeated and prolonged occupational overexposure to Crystalline Silica may cause silicosis, a progressively disabling lung disease.

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain, nervous system, liver or kidney damage or may cause cardiac arrhythmia. INTENTIONAL misuse of this product by deliberately inhaling its vapors may be harmful or fatal.

SECTION VI - STABILITY AND REACTIVITY

Stability: This product is stable

Hazardous Polymerization: Hazardous polymerization will not occur

INCOMPATIBILITY:

Keep away from strong oxidizing agents, alkalies, acids, and water contamination.

CONDITIONS TO AVOID:

Keep away from heat, spark, and open flame.

Product cures in contact with water.

HAZARDOUS DECOMPOSITION PRODUCTS:

Will produce fumes and smoke containing carbon monoxide and dioxide and nitrogen oxides under fire conditions.

SECTION VII - ACCIDENTAL RELEASE AND DISPOSAL MEASURES:
STEPS TO BE TAKEN IN CASE OF SPILL:
Eliminate all ignition sources.
Ventilate confined areas. (Open windows and doors)
Cover with absorbent, scoop into sealable safety container.
Wear protective clothing.

WASTE DISPOSAL METHOD:
Dispose of following local, state, and federal regulations.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

<table>
<thead>
<tr>
<th></th>
<th>ACGIH TLV</th>
<th>ACGIH TLV-C</th>
<th>ACGIH STEL</th>
<th>OSHA STEL</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide **</td>
<td>10.00 mg/F3</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>15.00 mg/F3</td>
</tr>
<tr>
<td>STODDARD SOLVENT</td>
<td>100.00 PPM</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>100.00 PPM</td>
</tr>
<tr>
<td>SILICA, QUARTZ</td>
<td>0.05 mg/F3</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>0.10 mg/M3</td>
</tr>
</tbody>
</table>

Note: The TLV for Silica is for the respirable fraction of dust only.

RESPIRATORY PROTECTION:
If TLV of the product is exceeded, wear NIOSH/MSHA jointly approved respiratory protection in the absence of proper ventilation. Follow applicable OSHA regulations.

VENTILATION:
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV. Ventilate during application and curing of this product.

PROTECTIVE CLOTHING:
Rubber gloves should be worn.
Cover arms and legs to minimize exposure.

EYE PROTECTION:
Eye protection should be worn.

HANDLING AND STORAGE PRECAUTIONS:
Keep away from sunlight, heat and flame
Keep container tightly closed when not in use
Wear protective clothing. Wash skin thoroughly after use.
Avoid contact with eyes, skin or clothing.
KEEP OUT OF REACH OF CHILDREN
MATERIAL SAFETY DATA SHEET

MSDS Name: PL(R) POLYURETHANE DOOR, WINDOW & SIDING SEALANT
MSDS Number: P73261125
Version Number 2
Revision Date: OCT-13-2005
Page Number: 5

SECTION IX - TRANSPORT INFORMATION: (not all sizes available)

GROUND TRANSPORT (DOT) - DOMESTIC
Caulking compound, Non Regulated

AIR TRANSPORT (DOT) - DOMESTIC
Caulking compound, Non Regulated

AIR TRANSPORT (IATA) - INTERNATIONAL
Caulking compound, Non Regulated

MARINE - OCEAN TRANSPORT (IMDG)
Caulking compound, Non Regulated

SECTION X - REGULATORY INFORMATION:
-PROP 65 (CARCINOGEN)
WARNING: This product contains a chemical known to the state of California to cause cancer.

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILICA, QUARTZ</td>
<td>14808-60-7</td>
<td>TRACE</td>
</tr>
</tbody>
</table>

The material fits the EPA Hazard Category definition of Immediate (Acute) and Delayed (Chronic) health hazards under SARA Sections 311, 312.

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MATERIAL SAFETY DATA SHEET

MSDS Name: PL(R) Polyurethane CONCRETE & MASONRY SEALANT gray
MSDS Number: P73263125
Version Number: 2
Revision Date: OCT-13-2005
Page Number: 1

SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: PL(R) Polyurethane CONCRETE & MASONRY SEALANT gray
HMIS Hazard Rating: Health: 1 Fire: 1 Reactivity: 0 PPE: G

Company Identification: HENKEL CONSUMER ADHESIVES
7405 PRODUCTION DRIVE
MENTOR OH 44060

Contact (24 hour): Customer Affairs (800)321-0253
Information phone/Fax: (440) 255-8900 / (440) 974-8358
CHEMTREC Emergency (24 hour): (703) 527-3887 (International)
(800) 424-9300
in Canada CANUTEC
613-996-6666

Product Class URETHANE SEALANT
Trade Name PL-BRANDS
Product Code See NO. above

SECTION II - INGREDIENT AND HAZARD INFORMATION

<table>
<thead>
<tr>
<th>Hazardous Ingredient Name</th>
<th>CAS Number</th>
<th>Percent</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide **</td>
<td>13463-67-7</td>
<td>&lt; 5.0</td>
<td>Y</td>
</tr>
<tr>
<td>STODDARD SOLVENT</td>
<td>8052-41-3</td>
<td>&lt; 5.0</td>
<td>Y</td>
</tr>
<tr>
<td>SILICA, QUARTZ</td>
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<td>TRACE</td>
<td>Y</td>
</tr>
</tbody>
</table>

Ingredient Notes:
Remaining ingredients are not considered OSHA hazardous.
**The main hazard for Titanium Dioxide is dust inhalation. Because of its incorporation into the caulk, exposure by inhalation is unlikely.

SECTION III - PHYSICAL AND CHEMICAL PROPERTIES

Form: Non sag caulk.
Appearance/Color: Various
Odor: Mild, oily
Solubility (in water): insol.
pH Value, +/- .3: Not Applicable
Boiling Range: 250.0°F - 484.0°F (121.11°C - 251.11°C)
Vapor Pressure (mmHg): less than 4 @ 68.0°F (20.0°C)
Evaporation Rate: 0.1 times Slower than n-Butyl Acetate

Vapor Density: Heavier than air

% Volatile, Weight: under 5.0%
% Volatile, Volume: Not Available
Specific Gravity: 1.1805
VOC (less H2O or exempt): < 44 Gr/L, 3%

NOTE:
*BOIL RANGE, EVAP RATE, VAPOR PRESSURE AND DENSITY FOR SOLVENT ONLY!

SECTION IV - FIRE FIGHTING MEASURES (Flash,UEL,LEL for solvent only)
- Flammability Class: IIIB
- Flash Range: 200.0°F (93.33°C)
  Pensky-Martens Closed Cup ASTM D 93
- Explosive Range (LEL/UEL): Not Available

EXTINGUISHING MEDIA:
Carbon Dioxide---Dry Chemical---Foam
Use water to cool material in vicinity of fire.

SPECIAL FIRE-FIGHTING PROCEDURES:
Use self-contained breathing apparatus with full facepiece
operated in pressure demand or other positive pressure mode.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Water may be unsuitable except as a cooling agent.
Use fog nozzle. Any closed container may rupture when
exposed to extreme heat.

SECTION V - HEALTH HAZARD DATA

ROUTES OF ENTRY:
ENTRY THROUGH...
Inhalation? Yes | Skin? Yes | Ingestion? Yes

TARGET ORGANS...
Overexposure -- Toluene Diisocyanate (<0.1%): Skin, Eyes
A known skin sensitizer

CARCINOGENICITY...
NTP? N/E | IARC Monographs? noted | OSHA? NO
Normal use of this product does not produce dust. Sanding dried
material could generate trace amounts of Silica (quartz) which
is a suspect human carcinogen by IARC.

EFFECTS OF OVEREXPOSURE
Eyes: Can cause irritation, redness, tearing and blurred vision.
Skin: Repeated contact can cause moderate irritation, dermatitis
MSDS Name: PL(R) Polyurethane CONCRETE & MASONRY SEALANT gray
MSDS Number: P73263125
Version Number: 2
Revision Date: OCT-13-2005
Page Number: 3

FIRST AID MEASURES

Eyes: Flush with large amounts of water for at least 15 minutes
lifting eyelids occasionally; get prompt medical attention
Skin: Wash thoroughly with soap and water; apply a mild skin
cream. Remove contaminated clothing. Rubbing alcohol may help
to remove uncured adhesive.
Inhalation: Remove affected person to fresh air.
Ingestion: Get medical attention if ill effects develop.

CHRONIC HAZARDS

CHRONIC HAZARDS: Preexisting respiratory or skin conditions may be
aggravated by exposure. This product contains an isocyanate. Skin and
respiratory sensitization can result from repeated exposures to
isocyanates. For most individuals these effects are reversible.
Persons previously sensitized to isocyanates may experience an
allergic respiratory reaction: signs/symptoms can include difficulty
breathing, wheezing, tightness of chest, and respiratory failure.
SILICA: Normal use of this product does not produce dust. Sanding dried
material could generate trace amounts of Silica (quartz) which
is a suspect human carcinogen (IARC group 1).
Repeated and prolonged occupational overexposure to Crystalline
Silica may cause silicosis, a progressively disabling lung disease.

NOTICE: Reports have associated repeated and prolonged
occupational overexposure to solvents with permanent brain,
nervous system, liver or kidney damage or may cause cardiac
arrhythmia. INTENTIONAL misuse of this product by
deliberately inhaling its vapors may be harmful or fatal.

SECTION VI - STABILITY AND REACTIVITY

Stability: This product is stable
Hazardous Polymerization: Hazardous polymerization will not occur

INCOMPATABILITY:
Keep away from strong oxidizing agents, alkalies, acids,
and water contamination.

CONDITIONS TO AVOID:
Keep away from heat, spark, and open flame.
Product cures in contact with water.

HAZARDOUS DECOMPOSITION PRODUCTS:
Will produce fumes and smoke containing carbon monoxide and
dioxide and nitrogen oxides under fire conditions.

SECTION VII - ACCIDENTAL RELEASE AND DISPOSAL MEASURES:
STEP TO BE TAKEN IN CASE OF SPILL:
Eliminate all ignition sources.
Ventilate confined areas. (Open windows and doors)
Cover with absorbent, scoop into sealable safety container.
Wear protective clothing.

WASTE DISPOSAL METHOD:
Dispose of following local, state, and federal regulations.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Occupational Exposure Limits</th>
<th>ACGIH TLV</th>
<th>ACGIH TLV-C</th>
<th>ACGIH STEL</th>
<th>OSHA STEL</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide **</td>
<td>10.00 mg/F3</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>15.00 mg/F3</td>
</tr>
<tr>
<td>STODDARD SOLVENT</td>
<td>100.00 PPM</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>100.00 PPM</td>
</tr>
<tr>
<td>SILICA, QUARTZ</td>
<td>0.05 mg/F3</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>0.10 mg/M3</td>
</tr>
</tbody>
</table>

Note: The TLV for Silica is for the respirable fraction of dust only.

RESPIRATORY PROTECTION:
If TLV of the product is exceeded, wear NIOSH/MSHA jointly approved respiratory protection in the absence of proper ventilation. Follow applicable OSHA regulations.

VENTILATION:
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV. Ventilate during application and curing of this product.

PROTECTIVE CLOTHING:
Rubber gloves should be worn.
Cover arms and legs to minimize exposure.

EYE PROTECTION:
Eye protection should be worn.

HANDLING AND STORAGE PRECAUTIONS:
Keep away from sunlight, heat and flame
Keep container tightly closed when not in use
Wear protective clothing, Wash skin thoroughly after use.
Avoid contact with eyes, skin or clothing.
KEEP OUT OF REACH OF CHILDREN
MATERIAL SAFETY DATA SHEET

MSDS Name: PL(R) Polyurethane CONCRETE & MASONRY SEALANT gray
MSDS Number: P73263125
Version Number  2
Revision Date:  OCT-13-2005
Page Number:  5

SECTION IX - TRANSPORT INFORMATION:  (not all sizes available)

GROUND TRANSPORT (DOT) - DOMESTIC
Caulking compound, Non Regulated

AIR TRANSPORT (DOT) - DOMESTIC
Caulking compound, Non Regulated

AIR TRANSPORT (IATA) - INTERNATIONAL
Caulking compound, Non Regulated

MARINE - OCEAN TRANSPORT (IMDG)
Caulking compound, Non Regulated

SECTION X - REGULATORY INFORMATION:
-PROP 65 (CARCINOGEN)
  WARNING: This product contains a chemical known to the state of California to cause cancer.

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<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>Percent</th>
</tr>
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<tr>
<td>SILICA, QUARTZ</td>
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The material fits the EPA Hazard Category definition of Immediate (Acute) and Delayed (Chronic) health hazards under SARA Sections 311, 312.

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MATERIAL SAFETY DATA SHEET

MSDS Name: PL(R) Polyurethane ROOF & FLASHING SEALANT- Black
MSDS Number: P73266125
Version Number: 2
Revision Date: OCT-13-2005
Page Number: 1

SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: PL(R) Polyurethane ROOF & FLASHING SEALANT- Black
HMIS Hazard Rating: Health: 1  Fire: 1  Reactivity: 0  PPE: G

Company Identification: HENKEL CONSUMER ADHESIVES
7405 PRODUCTION DRIVE
MENTOR OH 44060

Contact (24 hour): Customer Affairs (800) 321-0253
Information phone/Fax: (440) 255-8900 / (440) 974-8358
CHEMTREC Emergency (24 hour): (703) 527-3887 (International)
(800) 424-9300
in Canada CANUTEC
613-996-6666

Product Class: URETHANE SEALANT
Trade Name: PL-BRANDS
Product Code: See NO. above

SECTION II - INGREDIENT AND HAZARD INFORMATION

<table>
<thead>
<tr>
<th>Hazardous Ingredient Name</th>
<th>CAS Number</th>
<th>Percent</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide **</td>
<td>13463-67-7</td>
<td>&lt; 5.0</td>
<td>Y</td>
</tr>
<tr>
<td>STODDARD SOLVENT</td>
<td>8052-41-3</td>
<td>&lt; 5.0</td>
<td>Y</td>
</tr>
<tr>
<td>SILICA, QUARTZ</td>
<td>14808-60-7</td>
<td>TRACE</td>
<td>Y</td>
</tr>
</tbody>
</table>

Ingredient Notes:
Remaining ingredients are not considered OSHA hazardous.
**The main hazard for Titanium Dioxide is dust inhalation. Because of its incorporation into the caulk, exposure by inhalation is unlikely.

SECTION III - PHYSICAL AND CHEMICAL PROPERTIES

Form: Non sag caulk.
Appearance/Color: Various
Odor: Mild/oily
Solubility (in water): insol.
PH Value, +/- 3: Not Applicable
Boiling Range: 250.0°F - 484.0°F (121.11°C - 251.11°C)
Vapor Pressure (mmHg): less than 4.0 @ 68.0°F (20.0°C)
Evaporation Rate: 0.1 times slower than n-Butyl Acetate

Vapor Density: Heavier than air

% Volatile, Weight: under 5.8%
% Volatile, Volume: Not Available
Specific Gravity: 1.1805
VOC (less H2O or exempt): < 44 Gr/L, 3%

NOTE:
*BOIL RANGE, EVAP RATE, VAPOR PRESSURE AND DENSITY FOR SOLVENT ONLY!

SECTION IV - FIRE FIGHTING MEASURES (Flash,UEL,LEL for solvent only)
Flammability Class: IIIB
Flash Range: 200.0°F (93.33°C)
Pensky-Martens Closed Cup ASTM D 93
Explosive Range (LEL/UEL): Not Available

EXTINGUISHING MEDIA:
Carbon Dioxide---Dry Chemical---Foam
Use water to cool material in vicinity of fire.

SPECIAL FIRE-FIGHTING PROCEDURES:
Use self-contained breathing apparatus with full facepiece operated in pressure demand or other positive pressure mode.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Water may be unsuitable except as a cooling agent.
Use fog nozzle. Any closed container may rupture when exposed to extreme heat.

SECTION V - HEALTH HAZARD DATA

ROUTES OF ENTRY:
ENTRY THROUGH...
Inhalation? Yes | Skin? Yes | Ingestion? Yes

TARGET ORGANS...
Overexposure -- Toluene Diisocyanate (<0.1%): Skin, Eyes
A known skin sensitizer

CARCINOGENICITY...
NTP? N/E | IARC Monographs? noted | OSHA? NO
Normal use of this product does not produce dust. Sanding dried material could generate trace amounts of Silica (quartz) which is a suspect human carcinogen by IARC.

EFFECTS OF OVEREXPOSURE
Eyes: Can cause irritation, redness, tearing and blurred vision.
Skin: Repeated contact can cause moderate irritation, dermatitis
and possible sensitivity. Allergic reactions are possible.
Inhalation: Headaches, dizziness, nausea, decreased blood pressure, irritation, coughing, chest discomfort. See Chronic below.
Ingestion: Can cause gastrointestinal irritation, nausea.

FIRST AID MEASURES
Eyes: Flush with large amounts of water for at least 15 minutes lifting eyelids occasionally; get prompt medical attention
Skin: Wash thoroughly with soap and water; apply a mild skin cream. Remove contaminated clothing. Rubbing alcohol may help to remove uncured adhesive.
Inhalation: Remove affected person to fresh air.
Ingestion: Get medical attention if ill effects develop.

CHRONIC HAZARDS
CHRONIC HAZARDS: Preexisting respiratory or skin conditions may be aggravated by exposure. This product contains an isocyanate. Skin and respiratory sensitization can result from repeated exposures to isocyanates. For most individuals these effects are reversible. Persons previously sensitized to isocyanates may experience an allergic respiratory reaction: signs/symptoms can include difficulty breathing, wheezing, tightness of chest, and respiratory failure.
Silica: Normal use of this product does not produce dust. Sanding dried material could generate trace amounts of Silica (quartz) which is a suspect human carcinogen (IARC group 1).
Repeated and prolonged occupational overexposure to Crystalline Silica may cause silicosis, a progressively disabling lung disease.
NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain, nervous system, liver or kidney damage or may cause cardiac arrhythmia. INTENTIONAL misuse of this product by deliberately inhaling its vapors may be harmful or fatal.

SECTION VI - STABILITY AND REACTIVITY
Stability: This product is stable
Hazardous Polymerization: Hazardous polymerization will not occur

INCOMPATIBILITY:
Keep away from strong oxidizing agents, alkalies, acids, and water contamination.

CONDITIONS TO AVOID:
Keep away from heat, spark, and open flame.
Product cures in contact with water.

HAZARDOUS DECOMPOSITION PRODUCTS:
Will produce fumes and smoke containing carbon monoxide and dioxide and nitrogen oxides under fire conditions.

SECTION VII - ACCIDENTAL RELEASE AND DISPOSAL MEASURES:
STEPS TO BE TAKEN IN CASE OF SPILL:
Eliminate all ignition sources.
Ventilate confined areas. (Open windows and doors)
Cover with absorbent, scoop into sealable safety container.
Wear protective clothing.

WASTE DISPOSAL METHOD:
Dispose of following local, state, and federal regulations.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

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<td>100.00 PPM</td>
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<td>N/est</td>
<td>0.10 mg/M3</td>
</tr>
</tbody>
</table>

Note: The TLV for Silica is for the respirable fraction of dust only.

RESPIRATORY PROTECTION:
If TLV of the product is exceeded, wear NIOSH/MSHA jointly approved respiratory protection in the absence of proper ventilation. Follow applicable OSHA regulations.

VENTILATION:
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV. Ventilate during application and curing of this product.

PROTECTIVE CLOTHING:
Rubber gloves should be worn.
Cover arms and legs to minimize exposure.

EYE PROTECTION:
Eye protection should be worn.

HANDLING AND STORAGE PRECAUTIONS:
Keep away from sunlight, heat and flame
Keep container tightly closed when not in use
Wear protective clothing, Wash skin thoroughly after use.
Avoid contact with eyes, skin or clothing.

KEEP OUT OF REACH OF CHILDREN
SECTION IX - TRANSPORT INFORMATION: (not all sizes available)

GROUND TRANSPORT (DOT) - DOMESTIC
Caulking compound, Non Regulated

AIR TRANSPORT (DOT) - DOMESTIC
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AIR TRANSPORT (IATA) - INTERNATIONAL
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MARINE - OCEAN TRANSPORT (IMDG)
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SECTION X - REGULATORY INFORMATION:
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MATERIAL SAFETY DATA SHEET

MSDS Name: PL(R) SELF LEVELING Polyurethane CONCRETE CRACK SEALANT
MSDS Number: P77913125
Version Number 2
Revision Date: OCT-13-2005
Page Number: 1

SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: PL(R) SELF LEVELING Polyurethane CONCRETE CRACK SEALANT
HMIS Hazard Rating: Health: 1 Fire: 1 Reactivity: 0 PPE: G

Company Identification: HENKEL CONSUMER ADHESIVES
7405 PRODUCTION DRIVE
MENTOR OH 44060

Contact (24 hour): Customer Affairs (800)321-0253
Information phone/Fax: (440) 255-8900 / (440) 974-8358
CHEMTREC Emergency (24 hour): (703) 527-3887 (International)
(800) 424-9300
in Canada CANUTEC
613-996-6666

Product Class URETHANE SEALANT
Trade Name PL-BRANDS
Product Code P77912---

SECTION II - INGREDIENT AND HAZARD INFORMATION

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<th>Percent</th>
<th>TSCA</th>
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<td>Y</td>
</tr>
<tr>
<td>S**ODDARD SOLVENT</td>
<td>8052-41-3</td>
<td>&lt; 5.0</td>
<td>Y</td>
</tr>
<tr>
<td>SILICA, QUARTZ</td>
<td>14808-60-7</td>
<td>TRACE</td>
<td>Y</td>
</tr>
<tr>
<td>2,4 Toluene Diisocyanate</td>
<td>584-84-9</td>
<td>TRACE</td>
<td>Y</td>
</tr>
</tbody>
</table>

Ingredient Notes:
Remaining ingredients are not considered OSHA hazardous.
**The main hazard for Titanium Dioxide is dust inhalation. Because of its incorporation into the caulk, exposure by inhalation is unlikely.

SECTION III - PHYSICAL AND CHEMICAL PROPERTIES

Form: High viscosity liquid
Appearance/Color: Gray
Odor: Mild, oily
Solubility (in water): insol.
PH Value, +/- .3: Not Applicable
Material Safety Data Sheet

Name: PL(R) SELF LEVELING Polyurethane CONCRETE CRACK SEALANT

MSDS Number: P77913125
Version Number: 2
Revision Date: OCT-13-2005
Page Number: 2

沸点范围: 250.0°F - 450.0°F (121.11°C - 232.22°C)

气压(毫米汞柱): 小于4.0 68.0°F (20.0°C)

蒸发速率: 0.1倍慢于n-Butyl Acetate

蒸气密度: 重于空气

%易挥发,重量: 约3.0%
%易挥发,体积: 不可用

具体重力: 1.09828

VOC（小于H2O或豁免）: < 39 G/L, 3%

NOTE:
*BOIL RANGE, EVAP RATE, VAPOR PRESSURE AND DENSITY FOR SOLVENT ONLY!

- - - - - - - - - - - - - - - - - - - - - - - - - - - -

SECTION IV - FIRE FIGHTING MEASURES (Flash,UEL,LEL for solvent only)

可燃性类别: IIIA

闪点范围: 199.0°F (92.78°C)

Penksy-Martens Closed Cup ASTM D 93

爆炸范围 (LEL/UEL): 不可用

EXTINGUISHING MEDIA:

碳二酸---Dry Chemical---Foam

用水将材料冷却在火源附近。

SPECIAL FIRE-FIGHTING PROCEDURES:

使用包含的呼吸装置，带有完整的防毒面具

操作在压力需求或其它正压操作模式下。

UNUSUAL FIRE AND EXPLOSION HAZARDS:

水可能不适用，仅作为冷却剂。

使用雾状喷嘴。任何容器可能由于热而破裂。

- - - - - - - - - - - - - - - - - - - - - - - - - - -

SECTION V - HEALTH HAZARD DATA

ENTRY THROUGH...

吸入? 是 | 皮肤? 是 | 食物? 否

TARGET ORGANS...

过度暴露 -- 蒽二异氰酸酯 (<0.1%): 皮肤, 眼睛

A known skin sensitiser

CARCINOGENICITY...

NTP? N/E | IARC Monographs? noted | OSHA? NO

正常使用该产品不会产生灰尘。干燥材料可能产生硅酸（石英）的微小量，这是一个潜在的致癌物由IARC。

EFFECTS OF OVEREXPOSURE
Eyes: Can cause irritation, redness, tearing and blurred vision.
Skin: Repeated contact can cause moderate irritation, dermatitis and possible sensitivity. Allergic reactions are possible.
Inhalation: Headaches, dizziness, nausea, decreased blood pressure, irritation, coughing, chest discomfort. See Chronic below.
Ingestion: Can cause gastrointestinal irritation, nausea.

FIRST AID MEASURES
Eyes: Flush with large amounts of water for at least 15 minutes lifting eyelids occasionally; get prompt medical attention
Skin: Wash thoroughly with soap and water; apply a mild skin cream. Remove contaminated clothing. Rubbing alcohol may help to remove uncured adhesive.
Inhalation: Remove affected person to fresh air.
Ingestion: Get medical attention if ill effects develop.

CHRONIC HAZARDS
CHRONIC HAZARDS: Preexisting respiratory or skin conditions may be aggravated by exposure. This product contains an isocyanate. Skin and respiratory sensitization can result from repeated exposures to isocyanates. For most individuals these effects are reversible. Persons previously sensitized to isocyanates may experience an allergic respiratory reaction: signs/symptoms can include difficulty breathing, wheezing, tightness of chest, and respiratory failure.
SILICA: Normal use of this product does not produce dust. Sanding dried material could generate trace amounts of Silica (quartz) which is a suspect human carcinogen (IARC group 1).
Repeated and prolonged occupational overexposure to Crystalline Silica may cause silicosis, a progressively disabling lung disease.
NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain, nervous system, liver or kidney damage or may cause cardiac arrhythmia.
INTENTIONAL misuse of this product by deliberately inhaling its vapors may be harmful or fatal.

SECTION VI - STABILITY AND REACTIVITY
Stability: This product is stable
Hazardous Polymerization: Hazardous polymerization will not occur

INCOMPATIBILITY:
Keep away from strong oxidizing agents, alkalies, acids, and water contamination.

CONDITIONS TO AVOID:
Keep away from heat, spark, and open flame.
Product cures in contact with water.

HAZARDOUS DECOMPOSITION PRODUCTS:
Will produce fumes and smoke containing carbon monoxide and dioxide and nitrogen oxides under fire conditions.
SECTION VII - ACCIDENTAL RELEASE AND DISPOSAL MEASURES:

STEPS TO BE TAKEN IN CASE OF SPILL:
Eliminate all ignition sources.
Ventilate confined areas. (Open windows and doors)
Cover with absorbent, scoop into sealable safety container.
Wear protective clothing.

WASTE DISPOSAL METHOD:
Dispose of following local, state, and federal regulations.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

<table>
<thead>
<tr>
<th></th>
<th>ACGIH TLV</th>
<th>ACGIH TLV-C</th>
<th>ACGIH STEL</th>
<th>OSHA STEL</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide **</td>
<td>10.00 mg/F³</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>15.00 mg/F³</td>
</tr>
<tr>
<td>STODDARD SOLVENT</td>
<td>100.00 PPM</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>100.00 PPM</td>
</tr>
<tr>
<td>SILICA, QUARTZ</td>
<td>0.05 mg/F³</td>
<td>N/est</td>
<td>N/est</td>
<td>N/est</td>
<td>0.10 mg/M³</td>
</tr>
<tr>
<td>2,4 Toluene Diisocyanate</td>
<td>0.01 PPM</td>
<td>N/est</td>
<td>N/est</td>
<td>0.02 PPM</td>
<td>0.01 PPM</td>
</tr>
</tbody>
</table>

Note: The TLV for Silica is for the respirable fraction of dust only.

RESPIRATORY PROTECTION:
If TLV of the product is exceeded, wear NIOSH/MSHA jointly approved respiratory protection in the absence of proper ventilation. Follow applicable OSHA regulations.

VENTILATION:
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV. Ventilate during application and curing of this product.

PROTECTIVE CLOTHING:
Rubber gloves should be worn.
Cover arms and legs to minimize exposure.

EYE PROTECTION:
Eye protection should be worn.

HANDLING AND STORAGE PRECAUTIONS:
Keep away from sunlight, heat and flame
Keep container tightly closed when not in use
MATERIAL SAFETY DATA SHEET

MSDS Name: PL(R) SELF LEVELING Polyurethane CONCRETE CRACK SEALANT
MSDS Number: P77913125
Version Number 2
Revision Date: OCT-13-2005
Page Number: 5

Wear protective clothing, Wash skin thoroughly after use.
Avoid contact with eyes, skin or clothing.
KEEP OUT OF REACH OF CHILDREN

SECTION IX - TRANSPORT INFORMATION: (not all sizes available)

GROUND TRANSPORT (DOT) - DOMESTIC
Caulking compound, Non Regulated

AIR TRANSPORT (DOT) - DOMESTIC
Caulking compound, Non Regulated

AIR TRANSPORT (IATA) - INTERNATIONAL
Caulking compound, Non Regulated

MARINE - OCEAN TRANSPORT (IMDG)
Caulking compound, Non Regulated

SECTION X - REGULATORY INFORMATION:
SARA TITLE III SECTION 313:
This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4 Toluene Diisocyanate</td>
<td>584-84-9</td>
<td>TRACE</td>
</tr>
</tbody>
</table>

-PROP 65 (CARCINOGEN) WARNING: This product contains a chemical known to the state of California to cause cancer.

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILICA, QUARTZ</td>
<td>14808-60-7</td>
<td>TRACE</td>
</tr>
<tr>
<td>2,4 Toluene Diisocyanate</td>
<td>584-84-9</td>
<td>TRACE</td>
</tr>
</tbody>
</table>

The material fits the EPA Hazard Category definition of Immediate (Acute) and Delayed (Chronic) health hazards under SARA Sections 311, 312.

DISCLAIMER:
The information contained herein is based on data available as of the date of preparation of this MSDS and which we believe to be reliable.
However, no warranty is expressed or implied regarding the accuracy of the data. We shall not be responsible for the use of this information, or of any product, method, apparatus mentioned, and user must make his own investigation to determine the suitability of the information or products for his particular purpose, for the protection of the environment, and the health & safety of the users of this material.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Naval Jelly Rust Dissolver
IDH No. 1381191, 55342, 235119
Product type: Rust Dissolver
Region: United States
Company address: Henkel Corporation
32150 Just Imagine Drive
Avon, Ohio 44011

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>%</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>10-30</td>
<td>1 mg/m³ TWA</td>
<td>1 mg/m³ TWA</td>
<td>None</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
<td>3 mg/m³ STEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phosphate ester</td>
<td>1-5</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>UNKNOWN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>1-5</td>
<td>200 ppm TWA</td>
<td>400 ppm TWA</td>
<td>None</td>
</tr>
<tr>
<td>67-63-0</td>
<td></td>
<td>400 ppm STEL</td>
<td>980 mg/m³ TWA</td>
<td></td>
</tr>
<tr>
<td>Polysaccharide</td>
<td>1-5</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Proprietary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>0.1-1</td>
<td>0.2 mg/m³ TWA</td>
<td>1 mg/m³ TWA</td>
<td>None</td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Non hazardous components
Water > 50%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMI S:
Physical state: Gel
Color: Pink
Odor: Lime
HEALTH: 1*
FLAMMABILITY: 0
PHYSICAL HAZARD: 0
Personal Protection: See Section 8

CAUTION: MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
MAY BE HARMFUL IF SWALLOWED.

Relevant routes of exposure:
Eye contact, Skin contact, Inhalation, Ingestion

Potential Health Effects

Inhalation:
May cause respiratory tract irritation. Prolonged inhalation of large concentrations can be irritating to lungs, and mucous membranes of nose and throat.

Skin contact:
May cause skin irritation.

Eye contact:
Contact with eyes will cause irritation. May injure eye tissue if not removed promptly.

Ingestion:
May be harmful if swallowed.

Existing conditions aggravated by exposure:
Respiratory disorders.

Item No. : 1381191
See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If discomfort persists seek medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). If symptoms persist, obtain medical attention.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting. Keep individual calm. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point: None.

Autoignition temperature: Not applicable

Flammable/Explosive limits-lower %: Not applicable

Flammable/Explosive limits-upper %: Not applicable

Extinguishing media: Foam, dry chemical or carbon dioxide.

Special fire fighting procedures: None

Unusual fire or explosion hazards: Not flammable, however Hydrogen gas may be liberated if product contacts powdered metals or metals above 185°F.

Hazardous combustion products: None known.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Prevent product from entering drains or open waters.

Clean-up methods: Ensure adequate ventilation. Neutralize acid using lime or a lime based agent compatible with the product. Soak up with inert absorbent. Flush with water. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling.

Storage: Keep from freezing.

Incompatible products: Caustics. Powdered metals.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: General ventilation is acceptable if the exposure to materials in section 2 is maintained below applicable exposure limits. Refer to OSHA standards 1910.94, 1910.107, 1910.108

Respiratory protection: Not normally required.

Skin protection: Disposable rubber or plastic gloves.

Eye/face protection: Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Gel
Color: Pink
Odor: Lime
Vapor pressure: Low
pH: 1.5 - 2.5
Boiling point/range: Approximately 100°C (212°F)
Melting point/range: Not applicable
Specific gravity: 1.191
Vapor density: Not available
Evaporation rate: Not available
Solubility in water: Soluble.
Partition coefficient (n-octanol/water): Not available
VOC content: (calculated) 2.4%; 28.6 grams/liter

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous polymerization: Will not occur.
Hazardous decomposition products: Hydrogen, by reaction with metals
Incompatability: Powdered metals. Caustics.
Conditions to avoid: Storage with incompatible materials.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid 7664-38-2</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Phosphate ester UNKNOWN</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Isopropyl alcohol 67-63-0</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Polysaccharide Proprietary</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9</td>
<td>Known Carcinogen</td>
<td>Group 1</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Literature Referenced Target Organ & Other Health Effects

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid 7664-38-2</td>
<td>Corrosive, Irritant</td>
</tr>
<tr>
<td>Phosphate ester UNKNOWN</td>
<td>No data</td>
</tr>
<tr>
<td>Isopropyl alcohol 67-63-0</td>
<td>Allergen, Blood, Central nervous system, Irritant, Kidney, Liver, Brain, Spleen</td>
</tr>
<tr>
<td>Polysaccharide Proprietary</td>
<td>Irritant</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9</td>
<td>Corrosive, Irritant, Lung, Human carcinogen</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

EPA hazardous waste number: Not a RCRA hazardous waste. Waste must be tested to determine the applicable EPA hazardous waste numbers.

14. TRANSPORT INFORMATION

The shipping classifications in this section are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR):

- Proper shipping name: Phosphoric acid Solution
- Hazard class or division: 8
- Identification number: UN 1805
- Packing group: III
- Exceptions: (Not more than 4L) Consumer Commodity ORM-D
- Marine pollutant: None

International Air Transportation (ICAO/IATA):

- Proper shipping name: Phosphoric acid Solution
- Hazard class or division: 8
- Identification number: UN1805
- Packing group: III

WaterTransportation (IMO/IMDG):

- Proper shipping name: Phosphoric acid Solution
- Hazard class or division: 8
- Identification number: UN1805
- Packing group: III
- Marine pollutant: None

15. REGULATORY INFORMATION

United States Regulatory Information

- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12 (b) Export Notification: None.
- CERCLA/SARA Section 302 EHS: None above reporting de minimus.
- CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard
- CERCLA/SARA 313: Sulfuric acid (7664-93-9).
- California Proposition 65: This product contains a chemical known to the State of California to cause cancer.

Canada Regulatory Information

- CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: This material safety data sheet contains changes from the previous version in section(s): 2,3,15

Prepared by: Regulatory Affairs (440) 937-7000 05/08 Rev 04/09

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:              SILICONE SPRAY
Item No.:                  431278
Product Type:              Aerosol Lubricant

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients                     CAS No.
PETROLEUM DISTILLATES          64742-47-8
LIQUEFIED PETROLEUM GAS        68476-86-8

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Exposure Limits (TWA)</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>PETROLEUM DISTILLATES</td>
<td>N/A</td>
<td>2000 ppm</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>LIQUEFIED PETROLEUM GAS</td>
<td>1000 ppm</td>
<td>N/A</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Toxicity: Harmful or fatal if swallowed. Eye, skin, and upper respiratory tract irritant. Vapors will cause irritation. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage, also kidney and liver damage.

Primary Routes of Entry: Inhalation, ingestion, skin contact.

Signs and Symptoms of Exposure: Headache, nausea, dizziness, light headedness, staggering gait, giddiness.

Existing Conditions Aggravated by Exposure: None known
Product Name: LOCTITE SILICONE SPRAY
Item No.: 431278

3. HAZARDS IDENTIFICATION (continued)

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Target Organ and Other Health Effects</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>PETROLEUM DISTILLATES</td>
<td>N/A</td>
<td>NO NO NO</td>
</tr>
<tr>
<td>LIQUEFIED PETROLEUM GAS</td>
<td>N/A</td>
<td>NO NO NO</td>
</tr>
</tbody>
</table>

Abbreviations
CAR Cardiac                   CNS Central nervous system
IRR Irritant                  LUN Lung
NTO No Target Organs

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Call physician.
Inhalation: Remove to fresh air. If symptoms persist, obtain medical attention.
Skin Contact: Wash with soap and water.
Eye Contact:  Flush with water for 15 minutes. Obtain medical attention.

5. FIRE FIGHTING MEASURES

Flash Point: N/A
Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical
Special Firefighting Procedures: Not available
Hazardous Products formed by Fire or Thermal Decomp: Oxides of carbon.
Unusual Fire or Explosion Hazards: Do not spray near open flame or heated surfaces.

Explosive Limits:
(% by volume in air)Lower N/A
(% by volume in air)Upper N/A
6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak:
Remove source of ignition. Ventilate area well. Remove residual with an inert absorbant.

7. HANDLING AND STORAGE

Safe Storage: Do not store above 120°F. Do not expose to direct sunlight.

Handling: Do not spray near open flame or heated surfaces. Keep away from eyes. Avoid prolonged skin contact. Avoid prolonged breathing of vapors.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Rubber or plastic gloves.
Ventilation: Provide adequate ventilation to maintain vapor concentration below TLV.
Respiratory Not available

See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White liquid spray
Odor: Mild
Boiling Point: >100 °F
pH: Not available
Solubility in Water: Not available
Specific Gravity 0.88-0.92 g/ml
Volatile Organic Compound (EPA Method 24) Not available
Vapor Pressure: Not available
Vapor Density: Heavier than air
Evaporation Rate (Ether = 1) More than 1

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: None
Conditions to Avoid: Not available
Hazardous Decomposition Products (non-thermal): None
Product Name: LOCTITE SILICONE SPRAY
Item No.: 431278

11. TOXICOLOGICAL INFORMATION

See Section 3.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Dispose following EPA and local regulations for handling pressurized containers. Do not incinerate.

EPA Hazardous Waste Number: D001 - Hazardous waste per 40CFR 261.21

14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)
Domestic Ground Transport
Proper Shipping Name: Consumer Commodity
Hazard Class or Division: ORM-D
Identification Number: None
Marine Pollutant: None

IATA
Proper Shipping Name: Aerosols, flammable
Class or Division: Class 2.1
UN or ID Number: UN 1950

15. REGULATORY INFORMATION

CA Proposition 65: To the Best of our knowledge no proposition 65 chemicals are present in this product.

16. OTHER INFORMATION

Estimated NFPA(R) Code:
- Health Hazard: 3
- Fire Hazard: 4
- Reactivity Hazard: 1
- Specific Hazard: Does not apply

Estimated HMIS(R) Code:
- Health Hazard: 3*
- Flammability Hazard: 4
- Reactivity Hazards: 1
- Personal Protection: See Section 8.
16. OTHER INFORMATION

(24hr.) Phone: (440) 937-7000 or 1-800-624-7767
Chemical Spill: Chemtrec 1-800-424-9300

MSDS prepared by Regulatory Affairs 440-937-7000 02/02 Rev 03/09
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Extend Rust Neutralizer
Product type: Rust preventor
IDH number: 1381192,235285
Region: United States
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, CT 06067

ID number: 1381192

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Milky</td>
</tr>
<tr>
<td>Odor:</td>
<td>Mild</td>
</tr>
</tbody>
</table>

HEALTH: *1

FLAMMABILITY: 1

PHYSICAL HAZARD: 0

Personal Protection: See MSDS Section 8

CAUTION: CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

- Inhalation: Mild respiratory tract irritation.
- Skin contact: Irritating to skin.
- Eye contact: May cause severe eye irritation.
- Ingestion: Not expected under normal conditions of use. Gastric disturbances.

Existing conditions aggravated by exposure: Skin disorders. Eye disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymer</td>
<td>Proprietary</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Barium sulfate</td>
<td>7727-43-7</td>
<td>5 - 10</td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Propanediol-1,2</td>
<td>57-55-6</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Organic acid</td>
<td>Proprietary</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>7631-86-9</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

Non hazardous components

- Water 30-50%

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.
Skin contact: Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention.

Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion: Keep individual calm. Do not induce vomiting. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point: Does not flash.

Autoignition temperature: Not applicable

Flammable/Explosive limits - lower: Not applicable

Flammable/Explosive limits - upper: Not applicable

Extinguishing media: Will not burn.

Special firefighting procedures: Water should be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Unusual fire or explosion hazards: None

Hazardous combustion products: Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow material to contaminate ground water system.

Clean-up methods: Wipe up with adsorbent material (e.g. cloth, fleece).

7. HANDLING AND STORAGE

Handling: Avoid skin and eye contact. Do not wear contact lenses. Wash thoroughly after handling. Keep out of the reach of children.

Storage: Keep container closed. Store in original container until ready to use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.
### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymer</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Barium sulfate</td>
<td>10 mg/m3 TWA</td>
<td>5 mg/m3 TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Respirable fraction. 15 mg/m3 TWA Total dust.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>20 ppm TWA</td>
<td>50 ppm (240 mg/m3) TWA (SKIN)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Propanediol-1,2</td>
<td>None</td>
<td>None</td>
<td>10 mg/m3 TWA Aerosol.</td>
<td>None</td>
</tr>
<tr>
<td>Organic acid</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>6 mg/m3 TWA</td>
<td>20 MPPCF TWA</td>
<td>None</td>
<td>3 mg/m3 TWA Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td>0.8 mg/m3 TWA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Engineering controls:
Ensure adequate ventilation, especially in confined areas.

#### Respiratory protection:
Not normally required. Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

#### Eye/face protection:
Safety goggles or safety glasses with side shields.

#### Skin protection:
Disposable rubber or plastic gloves.

#### 10. STABILITY AND REACTIVITY

- **Stability:** Stable
- **Hazardous reactions:** Will not occur.
- **Hazardous decomposition products:** None
- **Incompatible materials:** None known
- **Conditions to avoid:** None known

#### 11. TOXICOLOGICAL INFORMATION

- **Acute oral product toxicity:** LD50 (rat) > 5,000 mg/kg (Estimated)
- **Acute dermal product toxicity:** LD50 (rabbit) > 2,000 mg/kg (Estimated)
12. ECOLOGICAL INFORMATION

Ecological information: No specific studies have been conducted by Henkel on the ecotoxicity or environmental fate of this material; however, commonly available data on the material indicate that uncontrolled releases to soil, ground water, or surface waters could entail acute and/or chronic ecological effects, depending on the quantity and concentration of such releases. Releases of volatile components to the atmosphere are not believed to entail significant ecological consequences provided such releases are within the exposure levels set forth in this document. Accordingly, all appropriate measures should be taken to avoid uncontrolled releases to the environment, and any spills or other uncontrolled releases which may occur should be contained and cleaned up immediately in accordance with Section 6.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: D002: Corrosive.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

International Air Transportation (ICAO/IATA)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

Water Transportation (IMO/IMDG)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None
15. REGULATORY INFORMATION

United States Regulatory Information

- **TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- **TSCA 12(b) Export Notification:** None above reporting de minimus
- **CERCLA/SARA Section 302 EHS:** None above reporting de minimus
- **CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health
- **CERCLA/SARA 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). 2-Butoxyethanol (CAS# 111-76-2).
- **California Proposition 65:** This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

- **CEPA DSL/NDSL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
- **WHMIS hazard class:** D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

**Prepared by:** Regulatory Affairs (440) 937-7000 04/09

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: LOCTITE EXTEND RUST NEUTRALIZER AEROSOL 10.25OZ 633877

2. COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>35-40</td>
</tr>
<tr>
<td>DIMETHYL ETHER</td>
<td>115-10-6</td>
<td>35-40</td>
</tr>
<tr>
<td>2-BUTOXYETHANOL*</td>
<td>111-76-2</td>
<td>1-10</td>
</tr>
<tr>
<td>Vinyl Terpolymer</td>
<td>27360-07-2</td>
<td>&lt;10</td>
</tr>
</tbody>
</table>

* This component is listed as a SARA Section 313 Toxic Chemical.

Ingredients which have exposure limits

<table>
<thead>
<tr>
<th>Exposure Limits (TWA)</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETONE</td>
<td>500 ppm TWA</td>
<td>1000 ppm TWA</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>1188 mg/m³</td>
<td>2400 mg/m³</td>
<td></td>
</tr>
<tr>
<td>2-BUTOXYETHANOL</td>
<td>20 ppm TWA skin</td>
<td>50 ppm TWA skin</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>120 mg/m³ skin</td>
<td>9 mg/m³ skin</td>
<td></td>
</tr>
<tr>
<td>FORMIC ACID</td>
<td>5 ppm TWA</td>
<td>5 ppm TWA</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exposure Limits (STEL)</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETONE</td>
<td>750 ppm</td>
<td>none</td>
</tr>
<tr>
<td>FORMIC ACID</td>
<td>1782 mg/m³</td>
<td>none</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Toxicity: Irritation of eyes, skin and respiratory system. May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, and blood forming systems.
3. HAZARDS IDENTIFICATION

Primary Routes of Entry: Exposure may be by inhalation and/or skin or eye contact, depending on conditions of use. To minimize exposure, follow recommendations for proper use, ventilation, and personal protective equipment.

Signs and Symptoms of Exposure: Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists. Redness and itching or burning sensation may indicate eye or excessive skin exposure.

Existing Conditions Aggravated by Exposure: None generally recognized.

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Literature Referenced</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETONE</td>
<td>BLO CNS IRR</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>DIMETHYL ETHER</td>
<td>CNS IRR</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>2-BUTOXYTETHANOL</td>
<td>AC3 BLO CNS IRR KID LIV</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>FORMIC ACID</td>
<td>CNS COR IRR KID MET</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
</tbody>
</table>

Abbreviations

N/A Not Applicable
CNS Central nervous system
IRR Irritant
KID Kidney
LIV Liver
NTO No Target Organs
AC3 ACGIH animal carcinogen
MET Metabolic

4. FIRST AID MEASURES

Ingestion: Never give anything by mouth to an unconscious person. Do not induce vomiting. Seek medical attention.

Inhalation: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

Skin Contact: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before reuse.

Eye Contact: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
5. FIRE FIGHTING MEASURES

Flash Point: N/A
Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical
Special Firefighting Procedures: Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool containers to prevent pressure build up and possible autoignition or explosion when exposed to extreme heat.

Hazardous Products formed by Fire or Thermal Decomp: Irritating organic vapors; oxides of carbon.
Unusual Fire or Explosion Hazards: Closed containers may explode (due to build-up of pressure) when exposed to extreme heat. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Application to hot requires special precautions. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent.

Explosive Limits: (% by volume in air) Lower N/A (% by volume in air) Upper N/A

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Remove all sources of ignition. Maintain good ventilation. Soak up with an inert absorbent. Store in a closed container until disposal.

7. HANDLING AND STORAGE

Safe Storage: Keep away from heat, sparks, and open flame.
Handling: Keep away from heat, sparks or open flame. Vapors will accumulate readily and may ignite explosively. Keep away from eyes. Avoid breathing of vapor and mists. Avoid skin contact. During use and until all vapors are gone: Keep area ventilated. Do not smoke. Extinguish all flames, pilot lights, and heaters. Turn off stoves, electric tools and appliances, and other sources of ignition. Consult NFPA Code. Use approved bonding and grounding
7. HANDLING AND STORAGE

(procedures. Do not puncture, incinerate, or expose to temperature above 120øF. Heat from sunlight radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Wash hands after using.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Wear safety spectacles with unperforated sideshields.

Skin: Chemical resistant gloves.

Ventilation: Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

Respiratory If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic/particulate respirator approved by NIOSH/MSHA for protection against materials in Section II. When sanding, wirebrushing, abrading burning or welding the dried film, wear a particulate respirator approved by OSHA/MSHA for protection against non-volatile materials in Section II.

See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear liquid
Odor: Pungent
Boiling Point: > 100 Deg F
pH: Not available
Solubility in Water: Soluble
Specific Gravity 0.82-0.86 g/mL
Volatile Organic Compound (EPA Method 24) 33%
Vapor Pressure: Not available
Vapor Density: More than 1 (base only)
Evaporation Rate (Ether = 1) faster than ether
10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: None
Conditions to Avoid: Not available
Hazardous Decomposition Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

See Section 3.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Do not incinerate. Depressurize container.
Dispose of in accordance with federal, state and local regulations.

EPA Hazardous Waste Number: D001 - Hazardous waste per 40CFR 261.21

14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)
Domestic Ground Transport
Proper Shipping Name: Consumer Commodity
Hazard Class or Division: ORM-D
Identification Number: None
Marine Pollutant: None

IATA
Proper Shipping Name: Consumer Commodity (Not more than 500 ml); Aerosols, flammable (More than 500 ml)
Class or Division: Class 9 (Not more than 500 ml); Division 2.1 (More than 500 ml)
UN or ID Number: ID 8000 (Not more than 500 ml); UN 1950 (More than 500 ml)

15. REGULATORY INFORMATION

CA Proposition 65: None
16. OTHER INFORMATION

Estimated NFPA(R) Code:
- Health Hazard: 2
- Fire Hazard: 3
- Reactivity Hazard: 1
- Specific Hazard: Does not apply

Estimated HMIS(R) Code:
- Health Hazard: 2*
- Flammability Hazard: 3
- Reactivity Hazards: 1
- Personal Protection: See Section 8.

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

24 Hour contact: 1-800-624-7767
Emergency: Chemtrec 1-800-424-9300
MSDS Prepared by Regulatory Affairs 440-937-7000 01/08 Rev 03/09
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite Aluminum Jelly Rust Dissolver
Item No. 1415346
Product type: Rust Dissolver
Region: United States
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact Information:
Telephone: 800.624.7767
Emergency telephone: 800.424.9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>%</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>10-30</td>
<td>1 mg/m³ TWA</td>
<td>3 mg/m³ STEL</td>
<td>None</td>
</tr>
<tr>
<td>Diethylene glycol monoethyl ether</td>
<td>1-5</td>
<td>None</td>
<td>None</td>
<td>25 ppm TWA (WEEL)</td>
</tr>
<tr>
<td>Nonionic surfactant</td>
<td>1-5</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>1-5</td>
<td>200 ppm TWA</td>
<td>400 ppm TWA</td>
<td>None</td>
</tr>
<tr>
<td>Polysaccharide</td>
<td>1-5</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>0.1-1</td>
<td>0.2 mg/m³ TWA thoracic fraction</td>
<td>1 mg/m³ TWA</td>
<td>None</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid
Color: Blue
Odor: Grape
HEALTH: 3*
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
Personal Protection: See Section 8

DANGER:
CAUSES EYE AND SKIN BURNS.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
MAY BE HARMFUL IF SWALLOWED.
MAY AFFECT THE CENTRAL NERVOUS SYSTEM.

Relevant routes of exposure: Eye contact, Skin contact, Inhalation, Ingestion

Potential Health Effects:

Inhalation: May cause respiratory tract irritation. Prolonged inhalation of large concentrations can be irritating to lungs, and mucous membranes of nose and throat.
Skin contact: Causes skin burns. May cause skin irritation. Redness.

Item No.: 1415346

Material Safety Data Sheet

Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Telephone: 800.624.7767
Emergency telephone: 800.424.9300

Issue date: 03/22/2010
Revision No.: 001
Ingestion: May be harmful if swallowed. May cause central nervous system effects, such as headache, nausea, vomiting, abdominal pain, dizziness, confusion, breathing difficulties.


See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Skin contact:** Immediately flush skin with plenty of water (using soap, if available). If symptoms persist, obtain medical attention.

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Ingestion:** DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

**Flash point:** None.

**Autoignition temperature:** Not applicable

**Flammable/Explosive limits-lower %:** Not applicable

**Flammable/Explosive limits-upper %:** Not applicable

**Extinguishing media:** Foam, dry chemical or carbon dioxide.

**Special fire fighting procedures:** None

**Unusual fire or explosion hazards:** Not flammable, however Hydrogen gas may be liberated if product contacts powdered metals or metals above 185°F.

**Hazardous combustion products:** None known.

6. ACCIDENTAL RELEASE MEASURES

**Environmental precautions:** Prevent product from entering drains or open waters.

**Clean-up methods:** Ensure adequate ventilation. Neutralize acid using lime or a lime based agent compatible with the product. Soak up with inert absorbent. Flush with water. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

**Handling:** Do not get in eyes. Do not get on skin or clothing. Do not taste or swallow. Avoid breathing vapor. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

**Storage:** Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. Keep from freezing.

**Incompatible products:** Refer to Section 10.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering controls:** Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.
Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Skin protection: Chemical resistant, impermeable gloves.

Eye/face protection: Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Blue
Odor: Grape
Vapor pressure: Low
pH: 1.5 - 2.5
Boiling point/range: Approximately 100°C (212°F)
Melting point/range: Not applicable
Specific gravity: 1.05
Vapor density: Not available
Evaporation rate: Not available
Solubility in water: Soluble.
Partition coefficient (n-octanol/water): Not available
VOC content: 2.23%; 23.73 grams/liter

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous polymerization: Will not occur.
Hazardous decomposition products: Hydrogen, by reaction with metals
Conditions to avoid: Storage with incompatible materials. Extremes of temperature and direct sunlight.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid 7664-38-2</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Diethylene glycol monoethyl ether 111-90-0</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Nonionic surfactant Proprietary</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Isopropyl alcohol 87-63-0</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Polysaccharide Proprietary</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sulfuric acid 7684-93-9</td>
<td>No</td>
<td>Group 1</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Literature Referenced Target Organ & Other Health Effects
<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid 7684-38-2</td>
<td>Corrosive, Irritant</td>
</tr>
<tr>
<td>Diethylene glycol monoethyl ether 111-90-0</td>
<td>Blood, Central nervous system, Irritant, Kidney</td>
</tr>
<tr>
<td>Nonionic surfactant Proprietary</td>
<td>Allergen, Irritant</td>
</tr>
<tr>
<td>Isopropyl alcohol 67-63-0</td>
<td>Allergen, Blood, Central nervous system, Irritant, Kidney, Liver, Brain, Spleen</td>
</tr>
<tr>
<td>Polysaccharide Proprietary</td>
<td>Irritant</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9</td>
<td>Corrosive, Irritant, Lung, Human carcinogen</td>
</tr>
</tbody>
</table>

### 12. ECOLOGICAL INFORMATION

Ecological information: Not available

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

EPA hazardous waste number: D002: Corrosive.

### 14. TRANSPORT INFORMATION

The shipping classifications in this section are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

**U.S. Department of Transportation Ground (49 CFR):**
- Proper shipping name: Phosphoric acid Solution
- Hazard class or division: 8
- Identification number: UN 1805
- Packing group: III
- Exceptions: (Not more than 4L) Consumer Commodity ORM-D
- Marine pollutant: None

**International Air Transportation (ICAO/IATA):**
- Proper shipping name: Phosphoric acid Solution
- Hazard class or division: 8
- Identification number: UN1805
- Packing group: III

**WaterTransportation (IMO/IMDG):**
- Proper shipping name: Phosphoric acid Solution
- Hazard class or division: 8
- Identification number: UN1805
- Packing group: III
- Marine pollutant: None
15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 5 (a) (2) SNUR: None.
TSCA 12 (b) Export Notification: None.
CERCLA/SARA Section 302 EHS: None above reporting de minimus.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).
Diethyleneglycol monoethyl ether (CAS# 111-90-0).

California Proposition 65: This product contains a chemical known to the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Domestic Substances List.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: This material safety data sheet contains changes from the previous version in section(s): 14

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.
TECHNICAL DATA SHEET

Loctite® Repair Putty Multi-Purpose is a two-part adhesive consisting of an epoxy resin putty and a hardener putty which are mixed by kneading. They react to produce a hard, tough, permanent and waterproof bond on a wide range of materials. Loctite® Repair Putty Multi-Purpose does not shrink and is resistant to most common solvents. It can bond to damp surfaces and cure under water. Loctite Epoxy Putty can be sanded, drilled and painted.

RECOMMENDED FOR:
Bonding metal, masonry, brick, wood, glass, ceramic, rubber, fiberglass composite, china, stone, marble and many rigid plastics. Use to seal pipes, fix leaks in tanks and drains, repair appliances, tools, furniture, toys, automotive parts, pools and cracks in concrete.

NOT RECOMMENDED FOR:
- Polyethylene and polypropylene.
- Applications above 121°C (250°F).
- Structural applications.
- Potable water systems.

FEATURES & BENEFITS:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High impact resistance………………….</td>
<td>Won’t crack when drilled</td>
</tr>
<tr>
<td>Moulds into different shapes………..</td>
<td>Will fit into any shape of crack</td>
</tr>
<tr>
<td>Does not shrink……………………..</td>
<td>One-time application</td>
</tr>
<tr>
<td>Sandable and paintable………………..</td>
<td>Blends with surroundings</td>
</tr>
<tr>
<td>Cures under water……………………</td>
<td>Great for emergency in-water repairs</td>
</tr>
</tbody>
</table>

Tools Typically Required:
Sandpaper or wire brush, damp cloth.

Safety Precautions:
Wear gloves.

Preparation:
Surfaces should be clean and free from grease and oil. For better adhesion, slightly roughen the surface with a wire brush or sandpaper prior to cleaning. Cut off desired length of Epoxy Putty and knead until uniform colour is obtained. Putty turns from blue to white when completely mixed.

Application:
Apply the putty to surface to be repaired within 3 minutes of mixing. Work putty firmly into the crack or hole. For bonding, place the putty between the surfaces and apply firm pressure to ensure intimate contact with both surfaces. If applying to a wet surface, apply forcefully and hold in place until adhesion takes effect. For a smooth finish, rub the putty with a damp cloth prior to hardening. Working time is approximately 5 minutes. After 45 minutes, the putty can be sanded, drilled or painted.

Clean-up:
Cured putty may be cut away with caution using a sharp blade.

Henkel Corporation
Professional and Consumer Adhesives
Rocky Hill, CT 06067
Phone 1-800-321-0253
Fax (440) 250-7863
www.henkel.com www.loctiteproducts.com

Loctite® Repair Putty
Multi-Purpose
EPXY_PUTTY
STORAGE AND DISPOSAL

Not damaged by freezing. Store unused product in a tightly sealed container. Knead unwanted putty, allow to harden and dispose with trash.

LABEL PRECAUTIONS

CONTENTS MAY BE HARMFUL: Do not swallow. Do not get in eyes or on skin or clothing. May cause allergic skin reaction. Always wear plastic or rubber gloves. KEEP OUT OF REACH OF CHILDREN. FIRST AID TREATMENT: Contains epoxy resin, amine resin and polymercaptan. If swallowed, call Poison Control Center or doctor immediately. Do not induce vomiting. If in eyes or on skin, rinse well with water. If on clothes, remove clothes immediately.

Refer to the Material Safety Data Sheet (MSDS) for further information

DISCLAIMER

The information and recommendations contained herein are based on our research and are believed to be accurate, but no warranty, express or implied, is made or should be inferred. Purchasers should test the products to determine acceptable quality and suitability for their own intended use. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

TECHNICAL DATA

<table>
<thead>
<tr>
<th>Typical Uncured Physical Properties</th>
<th>Typical Application Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Color:</strong> White</td>
<td><strong>Set Time:</strong> 4 to 7 minutes</td>
</tr>
<tr>
<td><strong>Hardener:</strong> Blue</td>
<td><strong>Handling Time:</strong> 45 minutes</td>
</tr>
<tr>
<td><strong>Resin:</strong> Epoxy resin / Polymercaptan hardener</td>
<td><strong>Curing Time:</strong> 24 hours</td>
</tr>
<tr>
<td><strong>Appearance:</strong> Putty</td>
<td><strong>Odor:</strong> Mild amine</td>
</tr>
<tr>
<td><strong>Base:</strong> Epoxy resin / Polymercaptan hardener</td>
<td><strong>Specific Gravity:</strong> 1.9</td>
</tr>
<tr>
<td><strong>VOC Content:</strong> 0.9 %</td>
<td><strong>Flash Point:</strong> &gt; 93°C (199°F)</td>
</tr>
<tr>
<td><strong>Flash Point:</strong> 24 months from date of manufacture</td>
<td></td>
</tr>
<tr>
<td><strong>Lot Code Explanation:</strong> YYDDD</td>
<td><strong>Lot Code Explanation:</strong> YYDDD</td>
</tr>
<tr>
<td>YY = Last two digits of year of manufacture</td>
<td>YY = Last two digits of year of manufacture</td>
</tr>
<tr>
<td>DDD = Day of manufacture</td>
<td>DDD = Day of manufacture</td>
</tr>
<tr>
<td>(Lot code stamped on foil seal of tube packaging)</td>
<td>(Lot code stamped on foil seal of tube packaging)</td>
</tr>
<tr>
<td>For example: 09061</td>
<td>For example: 09061</td>
</tr>
<tr>
<td>= 61st day of 2009</td>
<td>= 61st day of 2009</td>
</tr>
<tr>
<td>= March 2, 2009</td>
<td>= March 2, 2009</td>
</tr>
</tbody>
</table>
## Typical Cured Performance Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Temperature:</strong></td>
<td></td>
</tr>
<tr>
<td>Continuous</td>
<td>-27°C (-17°F) to 121°C (250°F)</td>
</tr>
<tr>
<td>Intermittent</td>
<td>-27°C (-17°F) to 149°C (300°F)</td>
</tr>
<tr>
<td><strong>Color:</strong></td>
<td>Off-white</td>
</tr>
<tr>
<td><strong>Dielectric Strength:</strong></td>
<td>300 volts / mil</td>
</tr>
<tr>
<td><strong>Electrical Resistance:</strong></td>
<td>30,000 mega ohms</td>
</tr>
<tr>
<td><strong>Compressive Strength:</strong></td>
<td>10,000 to 14,000 psi (69 MPa to 96 MPa)</td>
</tr>
<tr>
<td><strong>Hardness, Shore D:</strong></td>
<td>65 to 75</td>
</tr>
<tr>
<td><strong>Chemical Resistance:</strong></td>
<td>Hydrocarbons, ketones, alcohols, esters, halocarbons, aqueous salt solutions and dilute acids and bases.</td>
</tr>
<tr>
<td><strong>Lap Shear Tensile Strength:</strong></td>
<td></td>
</tr>
<tr>
<td>Steel</td>
<td>600 psi (4137 kPa)</td>
</tr>
<tr>
<td>Fiberglass</td>
<td>500 psi (3447 kPa)</td>
</tr>
</tbody>
</table>