Material Safety Data Sheet

Gastric Juice

MSDS # 300.00

Section 1: Product and Company Identification

Gastric Juice

Synonyms/General Names: Gastric Juice, Artificial
Product Use: For educational use only
Manufacturer: Columbus Chemical Industries, Inc., Columbus, WI 53925,

24 Hour Emergency Information Telephone Numbers
CHEMTREC (USA): 800-424-9300 CANUTEC (Canada): 613-424-6666
ScholAR Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

Section 2: Hazards Identification

Clear colorless liquid, no odor.

CAUTION! Slightly toxic by ingestion and body tissue irritant.
Target organs: Respiratory system, skin, eyes, lungs.

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

Section 3: Composition / Information on Ingredients

Hydrochloric Acid (7647-01-0), 1%. Pepsin 1:3000 (9001-75-6), < 1%
Water (7732-18-5), 98%.

Section 4: First Aid Measures

Always seek professional medical attention after first aid measures are provided.

Eyes: Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.
Skin: Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.
Ingestion: Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 cups of water or milk to drink. Induce vomiting immediately.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration.

Section 5: Fire Fighting Measures

Noncombustible solution. When heated to decomposition, emits acrid fumes.

Protective equipment and precautions for firefighters: Use foam or dry chemical to extinguish fire. Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Material is not sensitive to mechanical impact or static discharge.

Section 6: Accidental Release Measures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Contain spill with sand or absorbent material and place in sealed bag or container for disposal. Ventilate and wash spill area after pickup is complete. See Section 13 for disposal information.

Section 7: Handling and Storage

Handling: Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.
Storage: Store in General Storage Area [Green Storage] with other items with no specific storage hazards. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.

Section 8: Exposure Controls / Personal Protection

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Use NIOSH-approved respirator with an dust cartridge. Exposure guidelines: Hydrochloric Acid: OSHA PEL: 5 ppm ceiling and ACGIH TLV: 2 ppm ceiling, STEL: N/A.

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# Material Safety Data Sheet

## Gastric Juice

### Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular formula:</td>
<td>Mixture</td>
</tr>
<tr>
<td>Molecular weight:</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>1.008 g/mL @ 20°C.</td>
</tr>
<tr>
<td>Vapor Density (air=1):</td>
<td>0.7 (water)</td>
</tr>
<tr>
<td>Melting Point:</td>
<td>0°C.</td>
</tr>
<tr>
<td>Boiling Point/Range:</td>
<td>100°C.</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>N/A</td>
</tr>
<tr>
<td>Autoignition Temp.:</td>
<td>N/A</td>
</tr>
<tr>
<td>Appearance:</td>
<td>Clear colorless liquid.</td>
</tr>
<tr>
<td>Odor:</td>
<td>No odor.</td>
</tr>
<tr>
<td>Odor Threshold:</td>
<td>N/A.</td>
</tr>
<tr>
<td>Solubility:</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>&lt; 1 (Butyl acetate = 1)</td>
</tr>
<tr>
<td>Partition Coefficient:</td>
<td>N/A (log P&lt;sub&gt;OW&lt;/sub&gt;).</td>
</tr>
<tr>
<td>Vapor Pressure (20°C):</td>
<td>14 (water)</td>
</tr>
<tr>
<td>pH:</td>
<td>N/A</td>
</tr>
<tr>
<td>LEL:</td>
<td>N/A.</td>
</tr>
<tr>
<td>UEL:</td>
<td>N/A.</td>
</tr>
</tbody>
</table>

N/A = Not available or applicable

### Stability and Reactivity

Stability: Stable under normal conditions of use and storage.

Incompatibility: No specific data.

Shelf life: Fair shelf life, store in a cool, dry environment.

### Toxicology Information

**Acute Symptoms/Signs of exposure:**

- **Eyes:** Redness, tearing, itching, burning, conjunctivitis.
- **Skin:** Redness, itching.
- **Ingestion:** Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain. **Inhalation:** Irritation of mucous membranes, coughing, wheezing, shortness of breath.

**Chronic Effects:** No information found.

**Sensitization:** none expected

**Hydrochloric Acid:**
- LD<sub>50</sub> [oral, rabbit]: 900 mg/kg
- LC<sub>50</sub> [rat]: 3124 ppm (1 hour)
- LD<sub>50</sub> Dermal [rabbit]: N/A

Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.

### Ecological Information

**Ecotoxicity (aquatic and terrestrial):**

- Hydrochloric Acid: LC<sub>50</sub> - 282 mg/l - 96 h - Gambusia affinis (Mosquito fish)

### Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Small amounts of this material may be suitable for sanitary sewer or trash disposal.

### Transport Information

**DOT Shipping Name:** Not regulated by DOT.

**DOT Hazard Class:** Not regulated by DOT.

**Identification Number:** UN Number:

**Canada TDG:** Not regulated by TDG.

**Hazard Class:**

### Regulatory Information

**EINECS:** Not Listed.

**WHMIS Canada:** Not WHMIS Controlled.

**TSCA:** All components are listed or are exempt.

**California Proposition 65:** Not listed.

The product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

### Other Information

**Current Issue Date:** January 23, 2009

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