

Chemical  
**SULFUR POWDER**

Prepared 03/12/01  
By Dr. B. Dunlevy  
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## Section 1. Chemical identification

**Name: Sulfur powder**

## Section 2. Composition/information on ingredients

CAS # 7704-34-9

EINECS No: 231-722-6 MF: S

### Synonyms

Sulphur; agri-sul; asulfa-supra; atomic sulfur; bensulfoïd; brimstone; collokit; colloidal sulfur; colsul; corosul d and s; cosan; cosan 80; crystex; devisulphur; elosal; flour sulphur; flowers of sulphur; gofrativ; ground vocle sulphur; hexasul; kolofog; kolospray; kristex; kumulus; kumulus fl; micowetsulf; microflotox; microthiol; precipitated sulfur; sofril; sperlox-s; spersul; spersul thiovit; sublimed sulfur; sufran; sufran d; sulfex; sulfidal; sulforon; sulfur molten; sulkol; sulphur; super cosan; sulsol; technetium tc 99m sulfur colloid; tesuloid; thiolux; thiovit; thiovit s; thiozol; ultra sulfur; wettasul;

## Section 3. Hazards identification

### Label precautionary statements

- Irritant.
- Irritating to eyes, respiratory system and skin.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Wear suitable protective clothing.



**Irritant**

## Section 4. First aid measures

**In case of eye contact**, immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing of the eyes by separating the eyelids with fingers, and seek medical advice.

**In case of skin contact**, immediately flush skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes.

**If inhaled**, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen.

**If swallowed**, wash out mouth with water provided person is conscious. Call a physician. Do not induce vomiting.

**Wash** contaminated clothing before reuse.

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## Section 5. Fire fighting measures

### Extinguishing media

- Water spray, carbon dioxide, dry chemical powder or appropriate foam.

### Special fire fighting procedures

- Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

### Unusual fire and explosions hazards

- Powder sulfur like most materials in powder form, is capable of creating a dust explosion.
- Emits toxic fumes under fire conditions.
- When heated it burns and emits highly toxic fumes of SO<sub>x</sub>

## Section 6. Accidental release measures

- Evacuate area.
- Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.
- Wear disposable coveralls and discard them after use.
- Sweep up, place in a bag and hold for waste disposal.
- Avoid raising dust.
- Ventilate area and wash spill site after material pickup is complete.

## Section 7. Handling and storage

Store in **GREY** area.

Refer to Section 8.

## Section 8. Exposure controls/personal protection

- Chemical safety goggles.
- Long rubber or neoprene gauntlet gloves.
- Wear approved respirator EN149 in non-ventilated areas or for exposure above the OEL.
- Safety shower and eye bath.
- Mechanical exhaust required.
- Avoid breathing dust.
- Avoid contact with eyes, skin and clothing.
- Wash thoroughly after handling.
- Avoid prolonged or repeated exposure.
- Irritant.
- Keep tightly closed.

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**Goggles**



**Gloves**



**Respirator**



**Wash  
hands**

## **Section 9. Physical and chemical properties**

### **Appearance and odour**

Solid, rhombic yellow crystals, or yellow powder. Sulfur odour.

### **Physical properties**

Melting point:	112°C	Boiling point:	444.7°C
Autoignition temp.	189°C	Vapour pressure:	1mm @ 183.8°C
Specific gravity:	2.070	Vapour density:	8.9

## **Section 10. Stability and reactivity**

### **Incompatibilities**

- Oxidizing agents.
- Moisture.
- Combustible when exposed to heat or flame or by chemical reaction with oxidizers.
- Explosive in the form of dust when exposed to flame.
- Can react violently with many chemicals.

### **Hazardous combustion or decomposition products**

Toxic fumes of sulfur oxides.

## **Section 11. Toxicological information**

### **Acute effects**

- May be harmful by inhalation, ingestion, or skin absorption.
- Causes eye and skin irritation.
- Material is irritating to mucous membranes and upper respiratory tract.
- Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.
- Exposure can cause dermatitis.

### **Toxicity data**

ihl-mam LC<sub>50</sub>:1660 mg/m<sup>3</sup>

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## Safety profile:

Poison by ingestion, intravenous, and intraperitoneal routes. A human eye irritant. A fungicide. Chronic inhalation can cause irritation of mucous membranes.

## Section 12. Ecological information

Data not yet available.

## Section 13. Disposal considerations

- This material should be ignited in the presence of sodium carbonate and slaked lime (calcium hydroxide). The substance should be mixed with vermiculite and then with the dry caustics, wrapped in paper and burned in a chemical incinerator with an afterburner and scrubber.
- Observe all Irish, EU and local environmental regulations.

## Section 14. Transport information

- Contact chemical supplier for transportation information.

## Section 15. Regulatory information

### European information.

#### Irritant.

**R 36/37/38** Irritating to the eyes, respiratory system and skin.

**S 26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**S 37/38** Wear suitable gloves and eye/face protection.

**OEL-IRL:** TWA 10mg/m<sup>3</sup> (1999).



**Irritant**

## Section 16. Other information

*This MSDS has been prepared in DkIT and is designed for Irish Second Level School Science Laboratories use only where quantities handled are less than 50g. The above information is believed to be correct but does not claim to be all inclusive and shall be used only as a guide. Every effort has been made to ensure that this information provided conforms with the latest available data. DkIT, the Department of Education & Science, Limerick Education Centre, Sigma, Aldrich, Fluka, Dr. Dunlevy or Ms. F. Dunlevy shall not be held liable for any information errors in this MSDS or for any damage resulting from handling or from contact with the above product.*

Please address any comments or error observations to: [brian.dunlevy@dkit.ie](mailto:brian.dunlevy@dkit.ie)

## REFERENCES

Sigma Aldrich Fluka MSDS CD-ROM, Sax CD-ROM, MSDS on Internet.