# SAFETY DATA SHEET

## 1. PRODUCT

### 1.1 Product identifiers

Name: 2-Chloroethyl ethyl sulfide

CAS-No.: 693-07-2

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids (Category 3), H226

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

Carcinogenicity (Category 1A), H350

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

| | |
|---|---|
| Pictogram |  |
| Signal word | Danger |
| Hazard statement(s) | H226 Flammable liquid and vapour.<br>H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled<br>H314 Causes severe skin burns and eye damage.<br>H350 May cause cancer. |

| | |
|---|---|
| Precautionary statement(s) | P201 Obtain special instructions before use.<br>P202 Do not handle until all safety precautions have been read and understood.<br>P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.<br>P233 Keep container tightly closed.<br>P240 Ground/bond container and receiving equipment.<br>P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.<br>P242 Use only non-sparking tools.<br>P243 Take precautionary measures against static discharge.<br>P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.<br>P264 Wash skin thoroughly after handling.<br>P270 Do not eat, drink or smoke when using this product.<br>P271 Use only outdoors or in a well-ventilated area.<br>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.<br>P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.<br>P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.<br>P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.<br>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P310 Immediately call a POISON CENTER or doctor/ physician.<br>P322 Specific measures (see supplemental first aid instructions on this label).<br>P361 Remove/Take off immediately all contaminated clothing.<br>P363 Wash contaminated clothing before reuse.<br>P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.<br>P403 + P233 Store in a well-ventilated place. Keep container tightly closed.<br>P403 + P235 Store in a well-ventilated place. Keep cool.<br>P405 Store locked up.<br>P501 Dispose of contents/ container to an approved waste disposal plant. |

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Vesicant.

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

| | |
|---|---|
| Formula: | $C_4H_9ClS$ |
| CAS-No.: | 693-07-2 |
| EC-No.: | 211-742-1 |

**Hazardous components**

| Component | Classification | Concentration |
|---|---|---|
| **2-Chloroethyl ethyl sulphide** | | |
| | Flam. Liq. 3; Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Carc. 1A; H226, H301 + H311 + H331, H314, H350 | - |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

| |
|---|
| **General advice** |
| Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area. |
| **If inhaled** |
| If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. |
| **In case of skin contact** |
| Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician. |
| **In case of eye contact** |
| Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.Continue rinsing eyes during transport to hospital. |
| **If swallowed** |

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.2 Indication of any immediate medical attention and special treatment needed

no data available

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## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides, Sulphur oxides, Hydrogen chloride gas

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

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## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must

be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: 2 - 8 °C

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

| | |
|---|---|
| Eye/face protection | Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). |
| Skin protection | Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. |
| Body Protection | Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. |
| Respiratory protection | Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). |
| Control of environmental exposure | Prevent further leakage or spillage if safe to do so. Do not let product enter drains. |

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| Appearance | Form: liquid<br>Colour: colourless |
| Odour | no data available |
| Odour Threshold | no data available |
| pH | no data available |
| Melting point/freezing point | no data available |
| Initial boiling point and boiling range | 156 - 157 °C (313 - 315 °F) - lit. |
| Flash point | 52 °C (126 °F) - closed cup |
| Evaporation rate | no data available |
| Flammability (solid, gas) | no data available |
| Upper/lower flammability or explosive limits | no data available |
| Vapour pressure | no data available |
| Vapour density | no data available |
| Relative density | 1.07 g/cm3 at 25 °C (77 °F) |
| Water solubility | no data available |
| Partition coefficient: n-octanol/water | no data available |
| Auto-ignition temperature | no data available |
| Decomposition temperature | no data available |
| Viscosity | no data available |
| Explosive properties | no data available |
| Oxidizing properties | no data available |

### 9.2 Other safety information

no data available

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Strong oxidizing agentsStrong bases, Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

| |
|---|
| **Acute toxicity** |
| LD50 Oral - rat - 252 mg/kg<br>no data available |
| **Skin corrosion/irritation** |
| Skin - rabbit<br>Result: Severe skin irritation - 24 h |
| **Serious eye damage/eye irritation** |
| Eyes - rabbit<br>Result: Severe eye irritation - 24.00 h |
| **Respiratory or skin sensitisation** |
| no data available |
| **Germ cell mutagenicity** |
| Human<br>Other cell types<br>DNA inhibition<br>E. coli<br>DNA damage |
| **Carcinogenicity** |
| Human carcinogen.<br>Possible human carcinogen<br>IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.<br>ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.<br>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.<br>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |
| **Reproductive toxicity** |
| no data available<br>no data available |
| **Specific target organ toxicity -single exposure** |

| |
|---|
| no data available |
| **Specific target organ toxicity -repeated exposure** |
| no data available |
| **Aspiration hazard** |
| no data available |
| **Additional Information** |
| RTECS: WQ3250000<br>Skin contact may provoke the following symptoms:, Blistering, toxic epidermal necrolysis, Inhalation of vapors may cause:, sneezing, paroxysmal cough, loss of sense of smell, loss of taste, pharyngitis, Bronchitis. |

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

no data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

| |
|---|
| **Product** |
| Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. |
| **Contaminated packaging** |
| Dispose of as unused product. |

## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 2929 Class: 6.1 (3) Packing group: II

Proper shipping name: Toxic liquids, flammable, organic, n.o.s. (2-Chloroethyl ethyl sulphide)

Marine pollutant: No

Poison Inhalation Hazard: No

### IMDG

UN number: 2929 Class: 6.1 (3) Packing group: II EMS-No: F-E, S-D

Proper shipping name: TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (2-Chloroethyl ethyl sulphide)

Marine pollutant: No

### IATA

UN number: 2929 Class: 6.1 (3) Packing group: II

Proper shipping name: Toxic liquid, flammable, organic, n.o.s. (2-Chloroethyl ethyl sulphide)

## 15. REGULATORY INFORMATION

### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right To Know Components

| Component | CAS-No. | Revision Date |
|---|---|---|
| 2-Chloroethyl ethyl sulphide | 693-07-2 | |

### New Jersey Right To Know Components

| Component | CAS-No. | Revision Date |
|---|---|---|
| 2-Chloroethyl ethyl sulphide | 693-07-2 | |

### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

Acute Tox. Acute toxicity

Carc. Carcinogenicity

Eye Dam. Serious eye damage

Flam. Liq. Flammable liquids

H226 Flammable liquid and vapour.

H301 Toxic if swallowed.

H301 + H311 +H331 Toxic if swallowed, in contact with skin or if inhaled

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

### HMIS Rating

Health hazard: 3

Chronic Health Hazard: *

Flammability: 2

Physical Hazard 0

### NFPA Rating

Health hazard: 3

Fire Hazard: 2

Reactivity Hazard: 0