

# SAFETY DATA SHEET

Version: v1

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : 2-Chloroethyl Methyl Sulfide  
Product Number : C153648  
Brand : aladdin  
CAS-No. : 542-81-4

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

Identified uses : Laboratory chemicals, Manufacture of substances.

### 1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION  
Address : 14078 Meridian Parkway,  
Riverside, CA. 92518  
Telephone : +1 (833) 552-7181  
Fax : no data available

### 1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300  
CHEMTREC®, Outside the USA :

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

CFR 1910.1200: Acute Toxicity - Oral [Category 4] Acute Toxicity - Dermal [Category 4] Acute Toxicity - Inhalation [Category 4] Eye Damage/Irritation [Category 1] Flammable Liquids [Category 3] Skin Corrosion/Irritation [Category 1C]

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H226 Flammable liquid and vapor

H302 Harmful if swallowed

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|                                   |                                                                                                                                  |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| H311                              | Toxic in contact with skin                                                                                                       |
| H314                              | Causes severe skin burns and eye damage                                                                                          |
| H331                              | Toxic if inhaled                                                                                                                 |
| H350                              | May cause cancer                                                                                                                 |
| <b>Precautionary statement(s)</b> |                                                                                                                                  |
| P210                              | Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.                                  |
| P233                              | Keep container tightly closed.                                                                                                   |
| P240                              | Ground/bond container and receiving equipment.                                                                                   |
| P241                              | Use explosion-proof [electrical/ventilating/lighting/.../] equipment.                                                            |
| P242                              | Use only non-sparking tools.                                                                                                     |
| P243                              | Take precautionary measures against static discharge.                                                                            |
| P260                              | Do not breathe dust/fume/gas/mist/vapors/spray.                                                                                  |
| P261                              | Avoid breathing dust/fume/gas/mist/vapors/spray.                                                                                 |
| P264                              | Wash hands [and ...] thoroughly after handling.                                                                                  |
| P270                              | Do not eat, drink or smoke when using this product.                                                                              |
| P271                              | Use only outdoors or in a well-ventilated area.                                                                                  |
| P280                              | Wear protective gloves/protective clothing/eye protection/face protection.                                                       |
| P321                              | Specific treatment (see ... on this label).                                                                                      |
| P330                              | Rinse mouth.                                                                                                                     |
| P363                              | Wash contaminated clothing before reuse.                                                                                         |
| P301+P330+P331                    | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.                                                                               |
| P302+P352                         | IF ON SKIN: wash with plenty of water.                                                                                           |
| P303+P361+P353                    | IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].                         |
| P304+P340                         | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                                                       |
| P361+P364                         | Take off immediately all contaminated clothing and wash it before reuse.                                                         |
| P370+P378                         | In case of fire: Use ... to extinguish.                                                                                          |
| P405                              | Store locked up.                                                                                                                 |
| P403+P233                         | Store in a well-ventilated place. Keep container tightly closed.                                                                 |
| P403+P235                         | Store in a well-ventilated place. Keep cool.                                                                                     |
| P501                              | Dispose of contents/container to an approved waste disposal plant.                                                               |
| P203                              | Obtain, read and follow all safety instructions before use.                                                                      |
| P301+P317                         | IF SWALLOWED: Get medical help.                                                                                                  |
| P305+P354+P338                    | IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. |
| P318                              | if exposed or concerned, get medical advice.                                                                                     |
| P302+P361+P354                    | IF ON SKIN: Take off Immediately all contaminated clothing. Immediately rinse with water for several minutes.                    |
| P316                              | Get emergency medical help immediately.                                                                                          |

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

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                  |                      |
|------------------|----------------------|
| Synonyms         | : Hemisulfur mustard |
| Formula          | : C3H7ClS            |
| Molecular weight | : 110.6              |
| CAS No.          | : 542-81-4           |
| EC-NO.           | : no data available  |

| Component                           | Classification    | Concentration |
|-------------------------------------|-------------------|---------------|
| <b>2-Chloroethyl Methyl Sulfide</b> |                   |               |
|                                     | no data available | ≥98%(GC)      |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

no data available

#### If inhaled

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

#### In case of skin contact

Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician.

#### In case of eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

#### If swallowed

Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.

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

no data available

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

no data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Dry chemical, foam, water spray, carbon dioxide.

#### Unsuitable extinguishing media

Solid streams of water

## 5.2 Special hazards arising from the substance or mixture

These products include: Carbon oxides Sulfur oxides Halogenated compounds. Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume. WARNING: Highly toxic HCl gas is produced during combustion.

## 5.3 Advice for firefighters

Wear self-contained breathing apparatus if possible.

## 5.4 Further information

Use water spray to cool unopened containers.

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# SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

## 6.2 Environmental precautions

Prevent product from entering drains.

## 6.3 Methods and materials for containment and cleaning up

Absorb spilled material with dry sand or inert absorbent before recycling it into an airtight container. If there is a large amount of spillage, use seals to control the spillage. Adhered or aggregated materials shall be disposed of in a timely manner in accordance with local laws and regulations. Prevention of secondary hazards: remove all sources of ignition. In case of fire, fire extinguishing devices shall be prepared. Use spark proof tools and explosion-proof equipment.

## 6.4 Reference to other sections

For disposal see section 13.

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# SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated. Avoid contact with skin, eyes and clothing. Conditions for safe storage, including any incompatibilities

## 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in an explosion-proof refrigerator. Store under inert gas. Store locked up. Store away from incompatible materials such as oxidizing agents. Heat-sensitive Air-sensitive

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## 7.3 Specific end use(s)

no data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

Follow safe industrial engineering/laboratory practices when handling any chemical. Install a closed system or local exhaust. Also install safety shower and eye bath.

#### Personal protective equipment

##### Eye/face protection

Safety goggles. A face-shield, if the situation requires.

##### Skin protection

Gloves must be checked before use. Please use proper methods to remove the gloves (do not touch the outer surface of the gloves), and avoid any skin parts contacting the product. After use, please handle the contaminated gloves carefully according to relevant laws and regulations and effective laboratory rules and procedures. Please clean and blow dry the protective gloves selected for your hands must meet the specifications given in regulation (EU) 2016 / 425 and the en 374 standard derived from it.

##### Body Protection

Impervious gloves. Impervious protective clothing. Protective boots, if the situation requires.

##### Respiratory protection

Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.

##### Control of environmental exposure

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

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                                 |                                                   |
|-------------------------------------------------|---------------------------------------------------|
| a) Appearance                                   | form: Clear Liquid color: Colorless - Pale yellow |
| b) Odour                                        | no data available                                 |
| c) Odour Threshold                              | no data available                                 |
| d) pH                                           | no data available                                 |
| e) Melting point/freezing point                 | no data available                                 |
| f) Initial boiling point and boiling range      | 140°C (284°F)                                     |
| g) Flash point                                  | 42°C (108°F)                                      |
| h) Evaporation rate                             | no data available                                 |
| i) Flammability (solid, gas)                    | no data available                                 |
| j) Upper/lower flammability or explosive limits | no data available                                 |
| k) Vapour pressure                              | no data available                                 |

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|                                           |                   |
|-------------------------------------------|-------------------|
| l) Vapour density                         | no data available |
| m) Relative density                       | 1.13              |
| n) Water solubility                       | no data available |
| o) Partition coefficient: n-octanol/water | no data available |
| p) Auto-ignition temperature              | no data available |
| q) Decomposition temperature              | no data available |
| r) Viscosity                              | no data available |
| s) Explosive properties N                 | no data available |
| t) Oxidizing properties N                 | no data available |

## 9.2 Other safety information

no data available

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## SECTION 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

Spark, Open flame, Static discharge

### 10.5 Incompatible materials

Oxidizing agents

### 10.6 Hazardous decomposition products

Carbon dioxide, Carbon monoxide, Hydrogen chloride, Sulfur oxide

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

no data available

#### Skin corrosion/irritation

no data available

#### Serious eye damage/eye irritation

no data available

#### Respiratory or skin sensitisation

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no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**

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**

no data available

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## SECTION 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

no data available

### 12.6 Other adverse effects

no data available

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## SECTION 13:

### 13.1 Disposal considerations

**Product**

Disposal of product: Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance

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but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, water ways, or the soil. Other considerations: Observe all federal, state and local regulations when disposing of the substance.

#### Contaminated packaging

Disposal of container: Dispose of as unused product. Do not re-use empty containers.

## SECTION 14: Transport information

### DOT (US)

|                                                           |                                            |                                             |
|-----------------------------------------------------------|--------------------------------------------|---------------------------------------------|
| UN number: UN2924                                         | Packing group: III                         | Class: 3,8                                  |
| Proper shipping name: Flammable liquids, corrosive, n.o.s | Reportable Quantity(RQ): no data available | Poison Inhalation Hazard: no data available |
| Environmental Hazards: no data available                  |                                            |                                             |

### IMDG

|                                                           |                    |                              |
|-----------------------------------------------------------|--------------------|------------------------------|
| UN number: UN2924                                         | Packing group: III | EMS-No: EmS number: F-E, S-C |
| Proper shipping name: Flammable liquids, corrosive, n.o.s |                    |                              |

### IATA

|                                                           |                    |            |
|-----------------------------------------------------------|--------------------|------------|
| UN number: UN2924                                         | Packing group: III | Class: 3,8 |
| Proper shipping name: Flammable liquids, corrosive, n.o.s |                    |            |

## SECTION 15: Regulatory information

### Toxic Substance Control Act

This product is NOT on the EPA Toxic Substances Control Act (TSCA) inventory. The following notices are required by 40 CFR 720.36 (C) for those products not on the inventory list: (i) These products are supplied solely for use in research and development by or under the supervision of a technically qualified individual as defined in 40 CFR 720.0 et sec. (ii) The health risks of these products have not been fully determined. Any information that is or becomes available will be supplied on a SDS sheet. US Federal Regulations

### US Federal Regulations

SARA 313: Not Listed

SARA 302: Not Listed

### State Regulations

Massachusetts Not Listed

New Jersey Not Listed

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Pennsylvania Not Listed

**Other Information**

NFPA Rating: HMIS Classification: Health: 3 Health: 3 Flammability: 2 Flammability: 2 Instability: 0 Physical: 0

**International Inventories**

EC-No: 208-828-6

**SECTION 16: Other information**

|                         |                                                                                                |
|-------------------------|------------------------------------------------------------------------------------------------|
| <b>Prepared By</b>      | Regulatory Affairs<br>ALADDIN SCIENTIFIC CORPORATION<br>Email: QualityAssurance@aladdinsci.com |
| <b>Creation Date</b>    | 14-Oct-2022                                                                                    |
| <b>Revision Date</b>    | 13-Sep-2025                                                                                    |
| <b>Print Date</b>       | 19-Sep-2025                                                                                    |
| <b>Revision Summary</b> | SDS sections updated v1                                                                        |

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