SAFETY DATA SHEET

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

1.1 Product identifiers

Product name: Sulfur monochloride solution

Product Number: 293113
Brand: Aldrich

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

Identified uses: This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

1.3 Details of the supplier of the safety data sheet

Company: Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone: +1 314 771-5765
Fax: +1 800 325-5052

1.4 Emergency telephone

Emergency Phone #: 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Acute toxicity, Oral (Category 4), H302
Skin corrosion (Category 1A), H314
Serious eye damage (Category 1), H318
Carcinogenicity (Category 2), H351
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
Short-term (acute) aquatic hazard (Category 1), H400

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

2.2 GHS Label elements, including precautionary statements

Pictogram

Aldrich - 293113
Signal Word: Danger

Hazard statement(s)
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.

Precautionary statement(s)
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>75-09-2</td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>200-838-9</td>
<td></td>
</tr>
<tr>
<td>Index-No.</td>
<td>602-004-00-3</td>
<td></td>
</tr>
<tr>
<td>Registration number</td>
<td>01-2119480404-41-XXX</td>
<td></td>
</tr>
<tr>
<td>disulfur dichloride</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>10025-67-9</td>
<td></td>
</tr>
</tbody>
</table>

Aldrich - 293113  Page 2 of 13
SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance.

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. 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

4.3 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 powder
Dry sand

Unsuitable extinguishing media
Do NOT use water jet.

For the full text of the H-Statements mentioned in this Section, see Section 16.
5.2 Special hazards arising from the substance or mixture
Carbon oxides
Sulfur oxides
Hydrogen chloride gas

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe 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. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Do not flush with water. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
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. Never allow product to get in contact with water during storage.

Storage class
Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

**Ingredients with workplace control parameters**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td>75-09-2</td>
<td>TWA</td>
<td>50 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Remarks</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Confirmed animal carcinogen with unknown relevance to humans</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Potential Occupational Carcinogen</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>25 ppm</td>
<td>OSHA Specifically Regulated Chemicals/Carcinogens</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>125 ppm</td>
<td>OSHA Specifically Regulated Chemicals/Carcinogens</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>OSHA specifically regulated carcinogen</strong></td>
<td></td>
</tr>
<tr>
<td>disulfur dichloride</td>
<td>10025-67-9</td>
<td>C</td>
<td>1 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Biological occupational exposure limits</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Parameters</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Value</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Biological specimen</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Basis</strong></td>
</tr>
</tbody>
</table>

**Biological occupational exposure limits**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Parameters</th>
<th>Value</th>
<th>Biological specimen</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td>75-09-2</td>
<td>Dichloromethane</td>
<td>0.3 mg/l</td>
<td>Urine</td>
<td>ACGIH - Biological Exposure Indices (BEI)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Remarks</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>End of shift (As soon as possible after exposure ceases)</td>
<td></td>
</tr>
</tbody>
</table>
8.2 Exposure controls

**Appropriate engineering controls**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**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 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. Discharge into the environment must be avoided.

---

**SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Appearance</td>
<td>Form: liquid</td>
</tr>
<tr>
<td>b) Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>c) Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>d) pH</td>
<td>No data available</td>
</tr>
<tr>
<td>e) Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>f) Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>g) Flash point</td>
<td>() No data available</td>
</tr>
<tr>
<td>h) Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>i) Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>j) Upper/lower</td>
<td>No data available</td>
</tr>
</tbody>
</table>
flamability or explosive limits

k) Vapor pressure  
- 503.861 hPa at 20 °C (68 °F)
- 1,726.64 hPa at 55 °C (131 °F)

l) Vapor density  
4.7

m) Density  
1.359 g/cm³

Relative density  
No data available

n) Water solubility  
No data available

o) Partition coefficient: n-octanol/water  
No data available

p) Autoignition temperature  
232.77 °C (450.99 °F)

q) Decomposition temperature  
No data available

r) Viscosity  
No data available

s) Explosive properties  
Not classified as explosive.

t) Oxidizing properties  
one

9.2 Other safety information

Relative vapor density  
4.7

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

Reacts violently with water.

10.4 Conditions to avoid  
Exposure to moisture.

10.5 Incompatible materials  
Reacts violently with: Strong bases, Water, Alcohols, A mixture of this product and sodium or potassium will explode on impact.

10.6 Hazardous decomposition products  
In the event of fire: see section 5
SECTION 11: Toxicological information

11.1 Information on toxicological effects

   Mixture

   Acute toxicity
   Oral: No data available
   Inhalation: No data available
   Dermal: No data available

   Skin corrosion/irritation
   No data available

   Serious eye damage/eye irritation
   No data available

   Respiratory or skin sensitization
   No data available

   Germ cell mutagenicity
   No data available

   Carcinogenicity
   IARC: 2A - Group 2A: Probably carcinogenic to humans (Dichloromethane)
   NTP: RAHC - Reasonably anticipated to be a human carcinogen (Dichloromethane)
   OSHA: OSHA specifically regulated carcinogen (Dichloromethane)

   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

11.2 Additional Information
   Stomach - Irregularities - Based on Human Evidence

Components

Dichloromethane

   Acute toxicity
   LD50 Oral - Rat - male and female - > 2,000 mg/kg
   (OECD Test Guideline 401)
   LC50 Inhalation - Mouse - 4 h - 86 mg/l - vapor
   Remarks: (ECHA)
   Symptoms: Possible damages:, mucosal irritations
   LD50 Dermal - Rat - male and female - > 2,000 mg/kg
   (OECD Test Guideline 402)
   No data available
**Skin corrosion/irritation**
Skin - Rabbit
Result: Irritations - 4 h
(OECD Test Guideline 404)
Remarks: Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

**Serious eye damage/eye irritation**
Eyes - Rabbit
Result: Eye irritation
Remarks: (ECHA)
Remarks: Risk of corneal clouding.

**Respiratory or skin sensitization**
Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)

**Germ cell mutagenicity**
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster ovary cells
Result: positive
Test Type: Ames test
Test system: Salmonella typhimurium
Result: positive
Method: OECD Test Guideline 474
Species: Mouse - male and female - Bone marrow
Result: negative

**Carcinogenicity**
Limited evidence of carcinogenicity in animal studies
Suspected human carcinogens

**Reproductive toxicity**
No data available

**Specific target organ toxicity - single exposure**
Inhalation - May cause drowsiness or dizziness. - Central nervous system
Acute inhalation toxicity - Possible damages:, mucosal irritations

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

**disulfur dichloride**

**Acute toxicity**
LD50 Oral - Rat - male and female - 132 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h - 2.5 mg/l - vapor
(OECD Test Guideline 403)
Dermal: No data available
No data available

**Skin corrosion/irritation**
Remarks: No data available
Serious eye damage/eye irritation
Remarks: No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Test Type: Ames test
Test system: Salmonella typhimurium
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available
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

SECTION 12: Ecological information

12.1 Toxicity
Mixture
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 Endocrine disrupting properties
No data available

12.7 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life.

Components

Dichloromethane
Toxicity to fish
flow-through test LC50 - Pimephales promelas (fathead minnow) - 193.00 mg/l - 96 h
Remarks: (ECHA)
<table>
<thead>
<tr>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
<th>static test LC50 - Daphnia magna (Water flea) - 27 mg/l - 48 h (US-EPA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to bacteria</td>
<td>static test EC50 - activated sludge - 2,590 mg/l - 40 min (OECD Test Guideline 209)</td>
</tr>
<tr>
<td>Toxicity to fish (Chronic toxicity)</td>
<td>flow-through test LC50 - Pimephales promelas (fathead minnow) - 471 mg/l - 8 d Remarks: (ECHA)</td>
</tr>
<tr>
<td>disulfur dichloride</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

**Product**
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**
Dispose of as unused product.

### SECTION 14: Transport information

**DOT (US)**
- UN number: 2922  
- Class: 8 (6.1)  
- Packing group: I  
- Proper shipping name: Corrosive liquids, toxic, n.o.s. (disulfur dichloride, Dichloromethane)  
- Reportable Quantity (RQ): 1156 lbs  
- Poison Inhalation Hazard: No

**IMDG**
- UN number: 2922  
- Class: 8 (6.1)  
- Packing group: I  
- Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (disulfur dichloride, Dichloromethane)  
- Marine pollutant: yes

**IATA**
- UN number: 2922  
- Class: 8 (6.1)  
- Packing group: I  
- Proper shipping name: Corrosive liquid, toxic, n.o.s. (disulfur dichloride, Dichloromethane)

### SECTION 15: Regulatory information

**US TSCA Section 3**
This chemical/product is not and cannot be distributed in commerce (as defined in TSCA)
section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

**SARA 302 Components**
This material does not contain any components with a section 302 EHS TPQ.

**SARA 313 Components**
The following components are subject to reporting levels established by SARA Title III, Section 313:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td>75-09-2</td>
<td>2007-07-01</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazards**
Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td>75-09-2</td>
<td>2007-07-01</td>
</tr>
<tr>
<td>disulfur dichloride</td>
<td>10025-67-9</td>
<td>1993-02-16</td>
</tr>
</tbody>
</table>

**Pennsylvania Right To Know Components**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td>75-09-2</td>
<td>2007-07-01</td>
</tr>
<tr>
<td>disulfur dichloride</td>
<td>10025-67-9</td>
<td>1993-02-16</td>
</tr>
</tbody>
</table>

**California Prop. 65 Components**

, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.Dichloromethane

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td>75-09-2</td>
<td>2007-09-28</td>
</tr>
</tbody>
</table>

**Other regulations**
This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

---

**SECTION 16: Other information**

**Further information**
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Version: 6.5 Revision Date: 02/13/2023 Print Date: 07/20/2023