1. PRODUCT AND COMPANY IDENTIFICATION

Product name: (3-Mercaptopropyl)trimethoxysilane
Product Number: 175617
Brand: Aldrich
Supplier: Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone: +1 800-325-5832
Fax: +1 800-325-5052
Emergency Phone #: (314) 776-6555
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Harmful by ingestion, Skin sensitiser

GHS Classification
Acute toxicity, Dermal (Category 5)
Acute toxicity, Oral (Category 4)
Eye irritation (Category 2B)
Skin sensitization (Category 1)
Acute aquatic toxicity (Category 2)
Chronic aquatic toxicity (Category 2)

GHS Label elements, including precautionary statements

Pictogram

Signal word: Warning
Hazard statement(s)
H302 Harmful if swallowed.
H313 May be harmful in contact with skin.
H317 May cause an allergic skin reaction.
H320 Causes eye irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)
P273 Avoid release to the environment.
P280 Wear protective gloves.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification
Health hazard: 2
Flammability: 1
Physical hazards: 0

NFPA Rating
- Health hazard: 2
- Fire: 1
- Reactivity Hazard: 0

Potential Health Effects
- Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
- Skin: Harmful if absorbed through skin. May cause skin irritation.
- Eyes: May cause eye irritation.
- Ingestion: Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: C₆H₁₆O₃SSi
Molecular Weight: 196.34 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
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<tr>
<td>3-Trimethoxysilylpropane-1-thiol</td>
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<tr>
<td>CAS-No.</td>
<td>4420-74-0</td>
</tr>
<tr>
<td>EC-No.</td>
<td>224-588-5</td>
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4. 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
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.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides, silicon oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

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.

Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE
Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Normal measures for preventive fire protection.

Conditions for safe storage
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

8. EXPOSURE CONTROLS/PERSO NAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

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).

Hand 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.

Immersion protection
Material: butyl-rubber
Minimum layer thickness: 0.3 mm
Break through time: > 480 min
Material tested: Butoject® (Aldrich Z677647, Size M)

Splash protection
Material: Nature latex/chloroprene
Minimum layer thickness: 0.6 mm
Break through time: > 30 min
Material tested: Lapren® (Aldrich Z677558, Size M)

Eye protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form liquid
Colour colourless
10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
no data available

**Conditions to avoid**
no data available

**Materials to avoid**
Strong oxidizing agents, Strong acids, Alcohols

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides, silicon oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Oral LD50**
LD50 Oral - rat - 774 mg/kg

**Inhalation LC50**
no data available

**Dermal LD50**
LD50 Dermal - rabbit - 2,268 mg/kg

**Other information on acute toxicity**
no data available

**Skin corrosion/irritation**
no data available
**Serious eye damage/eye irritation**
no data available

**Respiratory or skin sensitization**
guinea pig - May cause sensitization by skin contact.

**Germ cell mutagenicity**
no data available

**Carcinogenicity**

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.

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.

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.

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

**Teratogenicity**
no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**
no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**
no data available

**Aspiration hazard**
no data available

**Potential health effects**

- **Inhalation**
  May be harmful if inhaled. May cause respiratory tract irritation.

- **Ingestion**
  Harmful if swallowed.

- **Skin**
  Harmful if absorbed through skin. May cause skin irritation.

- **Eyes**
  May cause eye irritation.

**Signs and Symptoms of Exposure**
Nausea, Headache, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**
no data available

**Additional Information**
RTECS: Not available

12. **ECOLOGICAL INFORMATION**

**Toxicity**

- **Toxicity to fish**
  LC50 - Danio rerio (zebra fish) - 439 mg/l - 96.0 h

- **Toxicity to daphnia and other aquatic invertebrates**
  EC50 - Daphnia magna (Water flea) - 6.7 mg/l - 48 h

- **Toxicity to algae**
  EC50 - Desmodesmus subspicatus (green algae) - 267 mg/l - 72 h
Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
UN number: 3082  Class: 9  Packing group: III  EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (3-Trimethoxysilylpropane-1-thiol)
Marine pollutant: Marine pollutant

IATA
UN number: 3334  Class: 9
Proper shipping name: Aviation regulated liquid, n.o.s. (3-Trimethoxysilylpropane-1-thiol)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

OSHA Hazards
Harmful by ingestion., Skin sensitiser

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
Acute Health Hazard

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

Pennsylvania Right To Know Components

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New Jersey Right To Know Components

3-Trimethoxysilylpropane-1-thiol

CAS-No.
4420-74-0

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

Further information
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