

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name: BIS[3-(TRIETHOXSILYL)PROPYL]DISULFIDE

Product Number: SC-2200

CAS No. 56706-10-6

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

Industrial.

Intermediate chemical

1.3 Details of the supplier of the safety data sheet

Manufactured/Supplied by Silsource Inc.

ADDRESS: 10625 Bryant Sideroad, Port Perry, Ontario, L9L 2C6

CHEMICAL EMERGENCY ONLY (PHONE): CANUTEC (613) 996-6666 [24 Hr.]

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Serious eye damage/eye irritation Category 2 H319

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

Adverse physicochemical, human health and environmental effects

No additional information available

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]



Pictogram

Signal word : Warning

Hazard statement(s)

H319 Causes serious eye irritation

Precautionary statement(s)

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P264 Wash hands thoroughly after handling

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

Other hazards not contributing to the classification

The hydrolysis product of this compound is ethanol. This product reacts with water in the acid contents of the stomach to form ethanol.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms BIS(TRIETHOXSILYL)-4,5-DITHIOOCTANE
Formula $C_{18}H_{42}O_6S_2Si_2$

Molecular Weight 486 g/mol
CAS-No. 56706-10-6
EC-No.: 260-350-7

| Name | Product identifier | % | Classification according to Regulation (EC) No.1272/2008 [CLP] |
|---|---|------|--|
| Bis[3-(triethoxysilyl)propyl]disulfide | (CAS-No.)56706-10-6 (EC-No.) 260-350-7 | >85 | Eye Irrit. 2, H319 |
| Bis[3-(triethoxysilyl)propyl]trisulfide | (CAS-No.)56706-11-7 (EC-No.) 260-350-7 | < 10 | Eye Irrit. 2, H319 |
| Bis[3-(triethoxysilyl)propyl]tetrasulfide | (CAS-No.)40372-72-3 (EC-No.) 254-896-5 | < 5 | Eye Irrit. 2, H319 |

3.2 Mixtures

Not Relevant

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

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.

In case of eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately flush eyes thoroughly with water for at least 15 minutes. Get medical advice/attention.

If swallowed

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

Most important symptoms and effects, both acute and delayed

| | |
|-------------------------------------|--|
| Symptoms/effects after inhalation | May cause irritation to the respiratory tract. |
| Symptoms/effects after skin contact | May cause skin irritation. |
| Symptoms/effects after eye contact | Causes serious eye irritation. |
| Symptoms/effects after ingestion | May be harmful if swallowed. |

Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, Water fog, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

| | |
|-------------|---|
| Fire hazard | Combustible liquid. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame. |
|-------------|---|

5.3 Advice for firefighters

| | |
|--------------------------------|--|
| Firefighting instructions | Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. |
| Protection during firefighting | Do not enter fire area without proper protective equipment, including respiratory protection. |

Avoid all eye and skin contact and do not breathe vapor and mist.

5.4 Further information

None available

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

General measures Remove ignition sources. Use special care to avoid static electric charges.

For non-emergency personnel

Emergency procedures Evacuate unnecessary personnel.

For emergency responders

Protective equipment Equip cleanup crew with proper protection.

6.2 Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up Clean up any spills as soon as possible, using an absorbent material to collect it.
Sweep or shovel spills into appropriate container for disposal. Use only non-sparking tools.

6.4 Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Precautions for safe handling

Avoid all eye and skin contact and do not breathe vapor and mist. Provide good ventilation in process area to prevent formation of vapor. Take precautionary measures against static discharge. Use only non-sparking tools.

Hygiene measures

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Wash contaminated clothing before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures Ground/bond container and receiving equipment.
Storage conditions Keep container tightly closed.
Incompatible materials Oxidizing agent.
Storage area Store in a well-ventilated place. Store away from heat.

7.3 Specific end uses

no data available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

No additional information available.

8.2 Exposure controls

Appropriate engineering controls

Provide local exhaust or general room ventilation.

Personal protective equipment

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection: Neoprene or nitrile rubber gloves

Eye protection:

Chemical goggles. Contact lenses should not be worn.

Skin and body protection:

Wear suitable protective clothing.

Respiratory protection

NIOSH-certified organic vapor (black cartridge) respirator.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | |
|--|--------------------|
| Physical state | liquid |
| Appearance | liquid |
| Odor | Sulfurous |
| Odor Threshold | no data available |
| pH | no data available |
| Relative evaporation rate (butylacetate=1) | no data available |
| Melting point | no data available |
| Freezing point | no data available |
| Boiling point | 250°C (decomposes) |
| Flash point: | 75°C |
| Auto-ignition temperature | no data available |
| Decomposition temperature | no data available |
| Flammability (solid, gas) | Combustible liquid |
| Vapor pressure: | < 1 mm Hg @ 25°C |
| Relative vapor density at 20°C | > 1 |
| Relative density | 1.025 |
| % Volatiles: | < 5 % |
| Solubility: | Reacts with water |
| Log Pow | no data available |
| Log Know | no data available |
| Viscosity, kinematic | no data available |
| Viscosity, dynamic | no data available |
| Explosive properties | no data available |
| Oxidizing properties | no data available |
| Explosive limits | no data available |

9.2 Other safety information

no data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

Stable in sealed containers.

10.3 Possibility of hazardous reactions

Material decomposes slowly in contact with moist air or with water liberating ethanol. Hazardous polymerization will not occur.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Oxidizing Agents

10.6 Hazardous decomposition products

Ethanol. Organic acid vapors. Silicon dioxide. Sulfur dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Not classified

| | |
|--|------------------------|
| Bis[3-(triethoxysilyl)propyl]tetrasulfide (40372-72-3) | |
| LD50 oral rat | 16400 mg/kg |
| ATE CLP (oral) | 16400 mg/kg bodyweight |

| | |
|---|--------------|
| Bis[3-(triethoxysilyl)propyl]disulfide (56706-10-6) | |
| LD50 oral rat | > 2000 mg/kg |

Skin corrosion/irritation

Not classified

Serious eye damage/eye irritation

Causes serious eye irritation

Respiratory or skin sensitization

Not classified

Germ cell mutagenicity

Not classified

Carcinogenicity

Not classified

Reproductive toxicity

Not classified

Specific target organ toxicity - single exposure

Not classified

Specific target orgtoxicity - repeated exposure

Not classified

Aspiration hazard

Not classified

Symptoms/effects after inhalation

May cause irritation to the respiratory tract.

Symptoms/effects after skin contact

May cause skin irritation.

Symptoms/effects after eye contact

Causes serious eye irritation.

Symptoms/effects after ingestion

May be harmful if swallowed.

Reason for classification

Expert judgment

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Acute aquatic toxicity

Not classified

Chronic aquatic toxicity

Not classified

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

| | |
|--|----------------------------------|
| Bis[3-(triethoxysilyl)propyl]tetrasulfide (40372-72-3) | |
| BCF fish 1 | (low potential to bioaccumulate) |

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

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product/Packaging disposal recommendations

Incinerate. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

Ecology - waste materials

Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

Not regulated for transport.

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packaging group

Not applicable

14.5 Environmental hazards

Other information

No supplementary information available

14.6 Special precautions for user

No data available

SECTION 15: REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

15.2 Chemical Safety Assessment

no data available.

SECTION 16: OTHER INFORMATION

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

Eye Irrit. 2

Serious eye damage/eye irritation, Category 2

H319

Causes serious eye irritation

This data is offered in good faith as typical values and not as a product specification. No warranty, either expressed or implied, is made. The recommended handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use.

This SDS was prepared sincerely on the basis of the information we could obtain, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. Products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.

This SDS is compliant with the GHS requirements outlined at
http://www.ccohs.ca/oshanswers/chemicals/whmis_ghs/sds.html

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