

SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

1. Identification

Product identifier: Si 69™

Chemical name:

Bis[3-(triethoxysilyl)propyl]polysulfide

Other means of identification

CAS Number: 211519-85-6

Recommended restrictions

Recommended use: Rubber - producing and processing industry

Restrictions on use: Not determined.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Corporation
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Parsippany, NJ 07054
USA

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Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)

Emergency : +1 800 681 9531 (CHEMTREC MEXICO)

+1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Hazard Classification

Not classified

Label Elements

Hazard Symbol: No symbol

Signal Word: No signal word.

Hazard Statement: Not applicable

Precautionary Statements

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Chemical name:

Bis[3-(triethoxysilyl)propyl]polysulfide

Substances

Composition Comments: This product does not contain any components considered to be health hazards under the OSHA Hazard Communication Standard 29 CFR 1910.1200 or under the Hazardous Products Regulations in Canada (WHMIS2015).

4. First-aid measures

Description of necessary first-aid measures

Inhalation: If aerosol or mists are formed: Take affected persons out into the fresh air.

Skin Contact: Gently wash with plenty of soap and water.

Eye contact: In case of contact, immediately flush eyes with plenty of water. Obtain medical attention if irritation develops.

Ingestion: If accidentally swallowed, rinse mouth thoroughly with water and afterwards, drink plenty of water. In case of discomfort, obtain medical attention.

Personal Protection for First-aid Responders: No data available.

Most important symptoms/effects, acute and delayed

Symptoms: None known.

Hazards: None known.

Indication of immediate medical attention and special treatment needed

Treatment: After absorbing large amounts of substance: Administration of activated charcoal: Acceleration of gastrointestinal passage.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, fog, CO₂, dry chemical, or regular foam.

Unsuitable extinguishing media: high volume water jet

Specific hazards arising from the chemical: May be released in case of fire: carbon monoxide, carbon dioxide, sulphur oxides.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.
Special protective equipment for fire-fighters:	No data available.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment.
Methods and material for containment and cleaning up:	Pick up mechanically with a suitable material, e.g., adsorption agent, activated charcoal, and collect in suitable container.
Environmental Precautions:	Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

7. Handling and storage**Handling**

Technical measures (e.g. Local and general ventilation):	see section 7.
Safe handling advice:	Handle in accordance with good industrial hygiene and safety practice. If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. Do not breathe in vapours or aerosols. Avoid contact with the skin and the eyes. Local ventilation. Always close container tightly after removal of product. Assure impermeability at all times.
Contact avoidance measures:	No data available.
Hygiene measures:	When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work. To ensure ideal skin protection: use super fatted soaps and skin cream for skin care. Wash contaminated clothing before reuse.

Storage

Safe storage conditions:	Storage at less than 10 °C may lead to a slight precipitation of crystalline sulfur, which should be removed by mechanical means. The product is not impaired by that. Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking. Keep away from humidity. Explosion protection is recommended in case the explosion limits for the following substance might be exceeded: Ethanol. Keep container tightly sealed and store in a dry, well-ventilated place. Storage temperature 10-40 °C Storage period: at least 12 months Do not store together with: acids and alkaline solutions.
Safe packaging materials:	No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering Controls see section 7.

Individual protection measures, such as personal protective equipment

Eye/face protection: goggles

Skin Protection

Hand Protection:

Material: Butyl rubber.
Break-through time: ≥ 480 min
Additional Information: Wear protective gloves made of resistant material.
Material: Nitrile rubber.
Break-through time: ≥ 480 min
Material: Fluorinated rubber (Viton)
Break-through time: ≥ 480 min
Additional Information: The rupture time and material thickness data are guideline values! Exact rupture time / material thickness data can be obtained from the protective glove manufacturer., The information is based on our own tests, references from the literature and information from glove manufacturers, or derived by analogy with similar materials., Please observe that the daily duration of usage of a chemical protective glove is in practice far shorter due to the many influencing factors (e.g. temperature, mechanical strain on the glove material) than the permeation time determined acc. EN 374.
Additional Information: The above mentioned hand protection is based on knowledge of the chemistry and anticipated uses of this product but it may not be appropriate for all workplaces. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes prior to use.

Skin and Body Protection: No special protective equipment required. When handling larger quantities: disposable protective suit (Solvent-resistant) A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Hygiene measures: When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work. To ensure ideal skin protection: use super fatted soaps and skin cream for skin care. Wash contaminated clothing before reuse.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Yellow
Odor:	Characteristic
Odor Threshold:	No data available.
pH:	Not applicable
Freezing point:	approx. -80 °C
Boiling Point:	Not applicable
Flash Point:	> 94 °C (DIN EN ISO 2719 (Pensky-Martens, Closed Cup)) 183 °C (ISO 2592:2000; JIS K 2265-4:2007 (Japan))
Evaporation Rate:	not determined
Flammability (solid, gas):	not determined
Explosive limit - upper (%):	7.5 %(V)
Explosive limit - lower (%):	0.5 %(V)
Vapor pressure:	approx. 1 hPa (20 °C) Ethanol.
Vapor density (air=1):	No data available.
Density:	approx. 1.1 g/cm ³ (20 °C)
Relative density:	No data available.
Solubility in Water:	Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable
Self Ignition Temperature:	not determined
Decomposition Temperature:	> 250 °C
Kinematic viscosity:	No data available.
Dynamic viscosity:	approx. 12 mPa.s (20 °C)
Other information	
Bulk density:	
Explosive properties:	No data available.
Oxidizing properties:	No data available.
Minimum ignition temperature:	240 °C
Peroxides:	Not applicable

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Reaction with water, acids and alkaline solutions. Formation of ethanol.
Conditions to avoid:	Keep away from heat and sources of ignition.
Incompatible Materials:	Reaction with water, acids and alkaline solutions. Formation of ethanol.
Hazardous Decomposition Products:	Carbon Monoxide. Carbon Dioxide. Hydrogen sulfide. Ethanol. Alcohol formed by hydrolysis lowers the flash point of the product.

11. Toxicological information

General information: Toxic effects from handling this product are unknown as yet.

Information on likely routes of exposure

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Ingestion: No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Ingestion: No data available.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)****Oral**

Product: LD 50 (Rat): > 17,500 mg/kg

Dermal

Product: LD 50 (Rat): > 2,000 mg/kg

Inhalation

Product: LC 50 (Rat): > 7.967 mg/l Dusts, mists and fumes

Repeated dose toxicity

Product: NOAEL (Rat, Oral): 200 mg/kg

Skin Corrosion/Irritation

Product: Not irritating FDA 1965 (Rabbit): Not irritating
Slightly irritating. FDA 1965 (Rabbit, 3 Weeks): Slightly irritating. repeated application

Serious Eye Damage/Eye Irritation

Product: Not irritating Rabbit: Not irritating

Respiratory or Skin Sensitization

Product: maximization test, OECD Test Guideline 406 (Guinea Pig): Not a skin sensitizer.

Carcinogenicity

Product: 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, IARC, or OSHA.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

US. National Toxicology Program (NTP) Report on Carcinogens:**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):****Germ Cell Mutagenicity****In vitro**

Product: Ames test (OECD TG 471): negative
gene mutation (OECD TG 476): negative
Chromosomal aberration (OECD TG 473): negative

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: no evidence for hazardous properties

Specific Target Organ Toxicity - Repeated Exposure

Product: no evidence for hazardous properties

Aspiration Hazard

Product: No evidence of aspiration toxicity

Other effects: No data available.

12. Ecological information**Ecotoxicity:****Acute hazards to the aquatic environment:****Fish**

Product: NOEC ((Brachydanio rerio), 96 h): $\geq 10,000$ mg/l The reported toxic effects relate to the nominal concentration.

Aquatic Invertebrates

Product: EL50 (Daphnia magna (Water flea), 48 h): > 10 mg/l Water Accomodated Fraction (WAF)

Chronic hazards to the aquatic environment:**Fish**

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: NOEC (Green Algae, 96 h): 1,000 mg/l The reported toxic effects relate to the nominal concentration.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration Factor (BCF)
Product: (OECD TG 305 C) low

Partition Coefficient n-octanol / water (log Kow)
Product: Log Kow: Not applicable

Mobility in soil: Adsorption on the floor: low.

Other adverse effects: The data we have at our disposal do not necessitate identification concerning environmental hazard.

13. Disposal considerations

Disposal methods: No waste key number as per the European Waste Types List can be assigned to this product, since such classification is based on the (as yet undetermined) use to which the product is put by the consumer. The waste key number must be determined as per the European Waste Types List (decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm / producing firm / official authority. Waste must be disposed of in accordance with local, state, provincial and federal laws and regulations. Empty containers must be handled with care due to product residue.

Contaminated Packaging: Packaging, that can not be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations. Incorrect disposal or reuse of this container is illegal and can be dangerous. Other countries: observe the national regulations. Recommended cleaning agent (ethanol, acetone)

14. Transport information

Domestic regulation

49 CFR

Not regulated as a dangerous good

Remarks : Not dangerous according to transport regulations.

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information**US Federal Regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Not classified

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

None present or none present in regulated quantities.

US. EPCRA (SARA Title III) Section 312 Extremely Hazardous Substances Reporting Quantities (40 CFR 355, Appendix A)

Not regulated.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations**US. California Proposition 65**

No ingredient requiring a warning under CA Prop 65.

US. New Jersey Worker and Community Right-to-Know Act

No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

No ingredient regulated by PA Right-to-Know Law present.

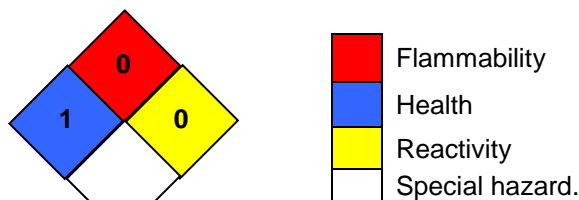
US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

16. Other information, including date of preparation or last revision
HMIS Hazard ID

Health		1
Flammability		0
Physical Hazards		0
PERSONAL PROTECTION		

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

NFPA Hazard ID


Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date: 11/04/2019

Version #: 1.1

Further Information: No data available.

Revision Information Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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