

Silquest* A-186 silane

SAFETY DATA SHEET

1. Identification

Product identifier: Silquest* A-186 silane

Other means of identification

Synonyms: Beta-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane

Recommended use and restriction on use

Recommended use: Adhesion Promoter

Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information : Momentive Performance Materials - Sistersville
10851 Energy Highway
FRIENDLY WV 26146

Contact person : commercial.services@momentive.com

Telephone : General information
+1-800-295-2392

Emergency telephone number

Supplier : CHEMTREC
1-800-424-9300

2. Hazard(s) identification

Hazard Classification

Health Hazards

Skin sensitizer	Category 1
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 2

Unknown toxicity - Health

Acute toxicity, oral	0.0013 %
Acute toxicity, dermal	0.0013 %
Acute toxicity, inhalation, vapor	0.0013 %
Acute toxicity, inhalation, dust or mist	0.0013 %

Label Elements

Hazard Symbol:

Silquest* A-186 silane



Signal Word: Warning

Hazard Statement: H317; May cause an allergic skin reaction.
 H341; Suspected of causing genetic defects.
 H351; Suspected of causing cancer.

Precautionary Statements

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: IF ON SKIN: Wash with plenty of water/... If skin irritation or rash occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Specific treatment (see on this label). Wash contaminated clothing before reuse.

Storage: Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

Substance(s) formed under the conditions of use: Reacts with water liberating small amounts of methanol.

3. Composition/information on ingredients

Substances

Chemical Identity	CAS number	Content in percent (%)*
Beta-(3,4-Epoxy-cyclohexyl)ethyltrimethoxysilane	3388-04-3	50 - <100%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

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General information:	Move into fresh air and keep at rest. Get medical attention immediately.
Ingestion:	If conscious, drink plenty of water. Do not induce vomiting. Call a physician or poison control center immediately.
Inhalation:	Move the exposed person to fresh air at once. If respiratory problems, artificial respiration/oxygen. Call a physician or poison control center immediately.
Skin Contact:	Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Wash contaminated clothing before reuse. Get medical attention.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Most important symptoms/effects, acute and delayed

Symptoms:	Product may hydrolyse upon contact with body fluids in the gastrointestinal tract to produce additional methanol; therefore, consider the signs/symptoms of methanol poisoning and also observe the known latency period of several days!
Hazards:	No data available.

Indication of immediate medical attention and special treatment needed

Treatment:	Treatment is symptomatic and supportive.
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5. Fire-fighting measures

General Fire Hazards:	No data available.
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Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	All standard extinguishing agents are suitable.
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical:	In case of fire, carbon monoxide and carbon dioxide may be formed. Oxides of silicon. Acute overexposure to the products of combustion may result in irritation of the respiratory tract.
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Special protective equipment and precautions for firefighters

Special fire fighting procedures:	Use water spray to keep fire-exposed containers cool.
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Special protective equipment for fire-fighters: Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Caution: Contaminated surfaces may be slippery. Avoid contact with skin and eyes. See Section 8 of the SDS for Personal Protective Equipment. Keep out of reach of children.

Methods and material for containment and cleaning up: Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section.

Environmental Precautions: Do not allow runoff to sewer, waterway or ground.

7. Handling and storage

Precautions for safe handling: Sensitivity to static discharge is not expected.

Conditions for safe storage, including any incompatibilities: Keep container closed. Keep away from sources of ignition - No smoking. Use original container or packaging of similar material of construction

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering Controls

Provide eyewash station and safety shower. General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment. Provide adequate ventilation if fumes or vapors are generated.

Individual protection measures, such as personal protective equipment

General information: General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment.

Eye/face protection: Safety glasses with side-shields conforming to EN166

Skin Protection

Hand Protection: Chemical resistant gloves

Other: Safety shoes Wear suitable protective clothing.

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Respiratory Protection: If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

Hygiene measures: Avoid contact with eyes. When using do not smoke. Wash thoroughly after handling.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Pale yellow
Odor:	Faint
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	< 0 °C
Initial boiling point and boiling range:	310 °C (1,013 hPa)
Flash Point:	113 °C (Tagliabue Closed Cup)
Evaporation rate:	< 1
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Heat of combustion:	No data available.
Vapor pressure:	< 1.33 hPa (20 °C)
Vapor density:	> 1
Density:	1.0650 g/cm ³ (25 °C)
Relative density:	No data available.
Solubility(ies)	
Solubility in water:	Reactive.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water) Log Pow:	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
SADT:	No data available.

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Viscosity, dynamic: No data available.
Viscosity, kinematic: No data available.
VOC: 1.7 g/l ;

10. Stability and reactivity

Reactivity: No dangerous reaction if used as recommended.

Chemical Stability: Material is stable under normal conditions.

Possibility of hazardous reactions: Avoid contact with: Peroxides. Catalytic metals. Polymerization catalysts.

Conditions to avoid: High Temperatures Moisture.

Incompatible Materials: Alkalies. Amines. Strong oxidizing agents.

Hazardous Decomposition Products: In case of fire, gives off (emits): Carbon oxides Oxides of silicon. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. Acute overexposure to the products of combustion may result in irritation of the respiratory tract.

11. Toxicological information

General information: Product may hydrolyze upon contact with body fluids in the gastrointestinal tract to produce additional methanol. The potential for toxic effects due to methanol formation (eye damage and blindness, metabolic acidosis, dizziness and drowsiness, fetal toxicity, and liver, kidney, and heart muscle damage) should be recognized.

Information on likely routes of exposure

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

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Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: Not classified for acute toxicity based on available data.

Dermal

Product: Not classified for acute toxicity based on available data.

Inhalation

Product: Not classified for acute toxicity based on available data.

Repeated dose toxicity

Product: NOAEL (Rabbit, Dermal, 19 d): 1 mg/kg

Skin Corrosion/Irritation

Product: No data available.

Serious Eye Damage/Eye Irritation

Product: No data available.

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

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

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

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Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Other effects:

No adverse effects anticipated from available information. No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: LC50 (Cyprinus carpio): 42.3 mg/l

Aquatic Invertebrates

Product: No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: EC50 (Algae): 36 mg/l

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

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Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Beta-(3,4-Epoxy-cyclohexyl)ethyltrimethoxysilane
No data available.

Other adverse effects: No data available.

13. Disposal considerations

General information: See Section 8 for information on appropriate personal protective equipment. The generation of waste should be avoided or minimized wherever possible. Do not discharge into drains, water courses or onto the ground.

Disposal instructions: Disposal should be made in accordance with federal, state and local regulations.

Contaminated Packaging: Dispose of as unused product.

14. Transport information

DOT
Not regulated.

IMDG
Not regulated.

IATA
Not regulated.

Special precautions for user: This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

15. Regulatory information

US Federal Regulations

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TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

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

Respiratory or Skin Sensitization
Germ Cell Mutagenicity
Carcinogenicity

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Beta-(3,4-Epoxy-cyclohexyl)ethyltrimethoxysilane	10000 lbs

SARA 313 (TRI Reporting)

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.

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

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65



WARNING

Reproductive Harm - www.P65Warnings.ca.gov

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

Chemical Identity

Beta-(3,4-Epoxy-cyclohexyl)ethyltrimethoxysilane
Related silane ester(s)
Methanol
Toluene

US. Massachusetts RTK - Substance List

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

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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.

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Inventory Status:

Australia AICS:	On or in compliance with the inventory	Remarks: None.
Canada DSL Inventory List:	On or in compliance with the inventory	Remarks: None.
EINECS, ELINCS or NLP:	On or in compliance with the inventory	Remarks: None.
Japan (ENCS) List:	On or in compliance with the inventory	Remarks: None.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory	Remarks: None.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory	Remarks: None.
Canada NDSL Inventory:	Not in compliance with the inventory.	Remarks: None.
Philippines PICCS:	On or in compliance with the inventory	Remarks: None.
US TSCA Inventory:	On or in compliance with the inventory	Remarks: None.
New Zealand Inventory of Chemicals:	On or in compliance with the inventory	Remarks: None.
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory	Remarks: None.
REACH:	If purchased from Momentive Performance Materials GmbH in Leverkusen, Germany, all substances in this product have been registered by Momentive Performance Materials GmbH or upstream in our supply chain or are exempt from registration under Regulation (EC) No 1907/2006 (REACH). For polymers, this includes the constituent monomers and other reactants.	Remarks: None.

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

HMIS Hazard ID

Health	*	2
Flammability		1
Physical Hazards		1
PERSONAL PROTECTION		

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

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Issue Date: 08/24/2018
Revision Date: No data available.
Version #: 3.0
Further Information: No data available.
Disclaimer:

Notice to reader

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Further Information

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