

Silquest* A-1100 silane

SAFETY DATA SHEET

1. Identification

Product identifier: Silquest* A-1100 silane

Other means of identification

Synonyms: Gamma-Aminopropyltriethoxysilane

Recommended use and restriction on use

Recommended use: Interface additive and adhesion promoter for coatings. Sizing agent for glass fibers used in insulation and reinforcement.

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

Physical Hazards

Flammable liquids Category 4

Health Hazards

Acute toxicity (Oral) Category 4
 Skin Corrosion/Irritation Category 1B
 Serious Eye Damage/Eye Irritation Category 1
 Skin sensitizer Category 1

Unknown toxicity - Health

Acute toxicity, inhalation, vapor	0 %
Acute toxicity, inhalation, dust or mist	0 %

Label Elements

Silquest* A-1100 silane

Hazard Symbol:



Signal Word: Danger

Hazard Statement: H227; Combustible liquid.
H302; Harmful if swallowed.
H314; Causes severe skin burns and eye damage.
H317; May cause an allergic skin reaction.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace.

Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. If skin irritation or rash occurs: Get medical advice/attention. IF SWALLOWED: Call a POISON CENTRE/doctor/... if you feel unwell. Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Specific treatment (see on this label). Wash contaminated clothing before reuse. In case of fire: Use alcohol resistant foam to extinguish.

Storage: Store in a well-ventilated place. Keep cool. 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: Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

Substance(s) formed under the conditions of use: Reacts with water forming ethanol.

3. Composition/information on ingredients

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Substances

Chemical Identity	CAS number	Content in percent (%)*
gamma-Aminopropyltriethoxysilane	919-30-2	50 - <100%

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

4. First-aid measures

- Ingestion:** If conscious, drink plenty of water. Do NOT induce vomiting.
- Inhalation:** Move the exposed person to fresh air at once.
- 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.
- Eye contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

Most important symptoms/effects, acute and delayed

Symptoms: Moderately toxic by swallowing. May cause acute kidney injury (renal cortical tubular necrosis) by massive peroral overdose or sustained skin contact. Due to the severely irritating or corrosive nature of the material, swallowing may lead to ulceration and inflammation of the upper alimentary tract with hemorrhage and fluid loss.

Also, perforation of the esophagus or stomach may occur, leading to mediastinitis or peritonitis and the resultant complications.

This material reacts immediately with water in the acid contents of the stomach to produce ethanol. Although ethanol production may occur, and there is a potential for nephrotoxicity, because of its intensely irritating effects, it is unlikely that large volumes of this material will be acutely ingested. Therefore, the irritant and aspiration hazards from regurgitation are more serious causes for concern. In view of this, it is recommended that emesis should not be induced in the conscious patient, neither mechanically nor pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be undertaken with caution in order to avoid perforation of inflamed or ulcerated areas of the upper alimentary tract, or to avoid aspiration (e.g., gastric lavage in the presence of endotracheal intubation).

- burning sensation

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

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5. Fire-fighting measures

General Fire Hazards: No data available.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Alcohol resistant foam. Carbon dioxide Dry chemical.

Unsuitable extinguishing media: Avoid water in straight hose stream; will scatter and spread fire.

Specific hazards arising from the chemical: Material reacts with water.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Use water spray to keep fire-exposed containers cool.

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. Do not taste or swallow. Do not get in eyes, on skin, on clothing. Use personal protective equipment as required. Wash hands after handling.

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

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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.

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 Face shield

Skin Protection

Hand Protection:

Chemical resistant gloves

Other:

Safety shoes Wear suitable protective clothing.

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:

Observe good industrial hygiene practices. Wash hands after handling. When using do not eat, drink or smoke. Provide adequate ventilation.

9. Physical and chemical properties

Appearance

Physical state:

liquid

Form:

liquid

Color:

Colorless

Odor:

amine like

Odor threshold:

No data available.

pH:

No data available.

Melting point/freezing point:

< -70 °C

Initial boiling point and boiling range:

220 °C (1,013 hPa)

Flash Point:

93 °C (ASTM D 93)

Evaporation rate:

< 1 (n-Butyl acetate=1)

Flammability (solid, gas):

Not applicable

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.

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Explosive limit - lower:	No data available.
Heat of combustion:	No data available.
Vapor pressure:	0.02 hPa (20 °C)
Vapor density:	Heavier than air
Density:	0.9500 g/cm ³ (25 °C)
Relative density:	0.95
Solubility(ies)	
Solubility in water:	5,400 g/l (20 °C)
Solubility (other):	No data available.
Partition coefficient (n-octanol/water) Log Pow:	1.7 (calculated)
Auto-ignition temperature:	270 °C
Decomposition temperature:	No data available.
SADT:	No data available.
Viscosity, dynamic:	No data available.
Viscosity, kinematic:	No data available.
Other information	
Minimum ignition temperature:	270 °C (1,010 hPa)
VOC:	947.22 g/l ;

10. Stability and reactivity

Reactivity:	Reacts with water.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Avoid contact with: Moisture. Heat, sparks, flames.
Incompatible Materials:	Reaction with water or other aqueous media is rapid and exothermic. The addition of small amounts of water (in the range of 2-15%) can produce an exothermic reaction which generates alcohol to the extent that the resulting solution can reach a temperature which exceeds the flash point of the new solution. If a water solution is desired, add the product to water, and not vice versa.
Hazardous Decomposition Products:	In case of fire, gives off (emits): Carbon oxides Oxides of silicon. Nitrogen Oxides 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.

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11. Toxicological information

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.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: LD 50 (Rat, female): 1,500 mg/kg
LD 50 (Rat, males): 2,700 mg/kg

Dermal

Product: LD 50 (Rabbit, male and female): > 4,000 mg/kg

Inhalation

Product: LC50 (Rat, males): > 7.35 mg/l

Repeated dose toxicity

Product: NOAEL (Rat(males), Oral, 90 h): 200 mg/kg (Target Organ(s): Liver)
NOAEL (Rat(female), Oral, 90 h): 200 mg/kg

Skin Corrosion/Irritation

Product: (Rabbit): Corrosive

Serious Eye Damage/Eye Irritation

Product: (Rabbit): Strongly irritating. Severely irritating, and may seriously damage eye tissue.

Respiratory or Skin Sensitization

Product: (Guinea Pig)Sensitizer

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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), as amended:

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: Ames-Test: negative
Chinese Hamster Ovary (CHO): negative

In vivo

Product: Micronucleus test (mouse): negative

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.

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Other effects: Not genotoxic in various in vitro or in vivo studies. No evidence for systemic toxicity by short-term recurrent (9-day) application to the skin of rabbits up to 84.0 mg/kg/day (6 hr/day, occlusive), although a cumulative local irritation occurs.

Recurrent exposure of rats to an aerosol of a hydrolyzate of this material (150 mg/m³) produced inflammatory and irritant effects in the nasal, laryngeal and tracheal mucosae, and inflammatory reactions in the lungs.

A separate laboratory study indicates that contact with a hydrolyzate of this organosilane ester does not result in skin sensitization.

The International Agency for Research on Cancer (IARC) has determined that the consumption of alcoholic beverages is causally related to the occurrence of malignant tumors of the oral cavity, pharynx, larynx, esophagus and liver in humans. The carcinogenic response attributed to drinking alcoholic beverages has not been verified in studies with laboratory animals. Established uses of denatured ethanol and non-beverage uses of pure ethanol are not considered to pose any significant cancer hazard.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: LC50 (Brachydanio rerio, 96 h): > 934 mg/l

Aquatic Invertebrates

Product: EC50 (Daphnia magna, 48 h): 331 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: EC50 (Desmodesmus subspicatus (green algae), 72 h): > 1,000 mg/l
 NOEC (Desmodesmus subspicatus (green algae), 72 h): 1.3 mg/l

Persistence and Degradability

Biodegradation

Product: 67 % (28 d) Not readily degradable. hydrolyses

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: Log Kow: 1.7 20 °C (calculated)

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

gamma-Aminopropyltriethoxysilane 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

UN Number:	UN 3267
UN Proper Shipping Name:	Corrosive liquid, basic, organic, n.o.s.(gamma-Aminopropyltriethoxysilane)
Transport Hazard Class(es)	
Class:	8
Label(s):	8
Packing Group:	II
Marine Pollutant:	No

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IMDG

UN Number:	UN 3267
UN Proper Shipping Name:	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.(gamma-Aminopropyltriethoxysilane)
Transport Hazard Class(es)	
Class:	8
Label(s):	8
EmS No.:	F-A, S-B
Packing Group:	II
Marine Pollutant:	No
Limited quantity	1.00L
Excepted quantity	E2

IATA

UN Number:	UN 3267
Proper Shipping Name:	Corrosive liquid, basic, organic, n.o.s.(gamma-Aminopropyltriethoxysilane)
Transport Hazard Class(es):	
Class:	8
Label(s):	8
Packing Group:	II
Cargo aircraft only Packing	855
Instructions:	
Passenger and cargo aircraft	855
Packing Instructions:	
Limited quantity:	Y840
Packing Instructions:	
Excepted quantity	E2
Environmental Hazards:	Not regulated.
Marine Pollutant:	No

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.

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

- Flammable (gases, aerosols, liquids, or solids)
- Acute toxicity (any route of exposure)
- Skin Corrosion or Irritation
- Serious eye damage or eye irritation

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Respiratory or Skin Sensitization
Hazards Not Otherwise Classified (HNOC)

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

Chemical Identity

Threshold Planning Quantity

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: This product can expose you to chemicals including Toluene, which is [are] known to the State of California to cause birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov.

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

Chemical Identity

gamma-Aminopropyltriethoxysilane

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.

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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	<input type="text" value="3"/>
Flammability	<input type="text" value="2"/>
Physical Hazards	<input type="text" value="2"/>
PERSONAL PROTECTION	<input type="text"/>

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: 04/03/2020
Revision Date: No data available.
Version #: 4.1
Further Information: No data available.
Disclaimer:

Notice to reader

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Further Information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safehandling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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