



MOMENTIVE
performance materials

Version: 1.1
10/26/2007

Silquest* A-174NT silane Gamma-Methacryloxypropyltrimethoxysilane

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufactured By: Momentive Performance Materials
3500 South State Route 2
FRIENDLY WV 26146

Revised: 10/26/2007

Preparer: PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS
CHEMTREC 1-800-424-9300

Chemical Family/Use: Organofunctional Silane Ester
Formula: Gamma-Methacryloxypropyltrimethoxysilane

HMIS

Flammability: 1 Reactivity: 1 Health: 2

NFPA

Flammability: 1 Reactivity: 1 Health: 2

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER! Harmful or fatal if swallowed. Harmful by inhalation of mist. May cause allergic skin reaction. May cause eye damage and blindness if swallowed. May cause dizziness and drowsiness. May cause heart muscle damage. May cause liver and kidney damage.

Form: Liquid

Color: Clear, pale

Odor: Ester-like

POTENTIAL HEALTH EFFECTS

INGESTION

Acute oral exposure (i.e., ingestion of significant quantities) during organogenesis may lead to increased reproductive risk. This product hydrolyzes in the stomach to form methanol. Methanol may cause nausea, abdominal pain, vomiting, headache, dizziness, shortness of breath, weakness, fatigue, leg cramps, restlessness, confusion, drunken behavior, visual disturbances, drowsiness, coma, and death. There may be a delay of several hours between swallowing methanol and the onset of signs and symptoms. The effects observed are in part due to acidosis and partially to cerebral edema. Visual effects include blurred vision, diplopia, changes in color perception, restriction of visual fields, complete blindness. Ingestion of moderate quantities of methanol also produces metabolic acidosis. Onset of symptoms may be delayed up to 48 hours. 60-200 ml methanol is fatal dose for most adults. Ingestion of as little as 10 ml methanol has caused blindness. With massive overdoses, liver, kidney and heart muscle injuries have been described.

SKIN

Brief contact results in: - slight irritation May cause the following effects: - slight local redness - allergic skin reaction in sensitized individuals - hypersensitivity reactions These reactions may be delayed. Prolonged and/or repeated contact may result in: - defatting of the skin - drying of the skin

INHALATION

Short-term harmful health effects are not expected from vapor generated at ambient temperature.



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However, this material is capable of forming methanol if hydrolyzed. Methanol vapor may cause dizziness, drowsiness, disturbances of vision, and tingling, numbness, and shooting pains in the hands and forearms. Long-term repeated overexposure to methanol vapor concentrations of 3000 ppm or greater may allow a cumulative effect to occur with resulting nausea, vomiting, headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, clouded and double vision. Liver and/or kidney injury may occur. Prolonged overexposure at levels of 800-1000 ppm may result in severe eye damage in some persons.

EYES

May cause mild irritation. May cause the following effects: - stinging - excess blinking - tear production - excess redness of the conjunctivae - swelling of the conjunctivae

MEDICAL CONDITIONS AGGRAVATED

May cause: - an allergic skin reaction in sensitized individuals May aggravate: - an existing kidney disease - an existing liver disease Skin contact may aggravate: - an existing dermatitis

SUBCHRONIC (TARGET ORGAN)

Skin; Eyes; Heart; Liver; Kidney

CHRONIC EFFECTS / CARCINOGENICITY

This product or one of its ingredients present at 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

ROUTES OF EXPOSURE

Ingestion; Inhalation; Dermal

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>PRODUCT COMPOSITION</u>	<u>CAS REG NO.</u>	<u>WGT. %</u>
<u>A. HAZARDOUS</u>		
gamma-Methacryloxypropyltrimethoxysilane	2530-85-0	> 90 %
Methanol	67-56-1	< 1 %

B. NON-HAZARDOUS

Note(s):

Additional methanol may be formed by reaction with moisture.



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4. FIRST AID MEASURES

INGESTION

If conscious, drink plenty of water. Induce vomiting if person is conscious. Obtain medical attention immediately.

SKIN

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before re-use. Obtain medical attention.

INHALATION

Remove to fresh air. Artificial respiration and/or oxygen may be necessary. Obtain medical attention immediately.

EYES

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

NOTE TO PHYSICIAN

Product may hydrolyze 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.

5. FIRE-FIGHTING MEASURES

FLASH POINT:	108 °C; 226 °F. estimated
METHOD:	Tag closed cup
FLAMMABLE LIMITS IN AIR - LOWER (%):	Not available
FLAMMABLE LIMITS IN AIR - UPPER (%):	Not available

SENSITIVITY TO MECHANICAL IMPACT: No

SENSITIVITY TO STATIC DISCHARGE

Sensitivity to static discharge is not expected.

EXTINGUISHING MEDIA

All standard extinguishing agents are suitable.

SPECIAL FIRE FIGHTING PROCEDURES

Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.



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6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

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.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Avoid contact with skin and eyes. Keep away from children. Attention: Not for injection into humans.

Other precautions

Harmful or fatal if swallowed due to methanol production in the stomach.

STORAGE

Keep container closed. Store in original container.

FURTHER INFORMATION ON STORAGE CONDITIONS

No data available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

Use only in an area equipped with a safety shower.; Eye wash bottle with pure water; General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment.; Special, local ventilation is needed at points where vapors can be expected to escape to the workplace air.

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).

PROTECTIVE GLOVES

Impermeable or chemical resistant gloves.

EYE AND FACE PROTECTION

Safety glasses

OTHER PROTECTIVE EQUIPMENT

Safety shoes; Protective suit



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Exposure Guidelines

Component	CAS RN	Source	Value
Methanol	67-56-1	ACGIH, TWA	200 ppm
Methanol	67-56-1	ACGIH, STEL	250 ppm
Methanol	67-56-1	ACGIH, SKIN_DES	Can be absorbed through the skin.
Methanol	67-56-1	OSHA Z1, PEL	200 ppm; 260 mg/m ³

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT - C & F:	255 °C; 491 °F; estimated
VAPOR PRESSURE (20 C) (MM HG):	< 1
VAPOR DENSITY (AIR=1):	> 1
FREEZING POINT:	< -40 °C; < -40 °F
MELTING POINT:	< -40 °C; < -40 °F
PHYSICAL STATE:	Liquid
ODOR:	Ester-like
COLOR:	Clear, pale
EVAPORATION RATE (BUTYL ACETATE=1):	< 1
DENSITY:	1.0450 g/cm ³ estimated
VOLATILE ORGANIC CONTENT (VOL):	Not determined
SOLUBILITY IN WATER (20 C):	Reacts slowly
VOC EXCL. H₂O & EXEMPTS (G/L):	248.10

10. STABILITY AND REACTIVITY

STABILITY

Product is inhibited against polymerization.

HAZARDOUS POLYMERIZATION

Product is inhibited against polymerization.

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS

Burning can produce the following combustion products: Oxides of carbon.; 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.



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INCOMPATIBILITY (MATERIALS TO AVOID)

Alkalis. Metal salts. Oxidizing agents. Water Free radical initiators, such as peroxides. May cause exothermic polymerization or degradation of the product.

CONDITIONS TO AVOID

High temperatures. Heat. Alkalis. Metal salts. Strong oxidizing agents. Free radical initiators, such as peroxides. May cause exothermic polymerization or degradation of the product.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL

LD50; Species: Rat.; > 2,000 mg/kg;

ACUTE DERMAL

LD50; Species: Rat.; > 2,000 mg/kg;

ACUTE INHALATION

Remarks: No data available

OTHER

Inhalation studies in laboratory animals have shown that repeated exposures to high concentrations of a respirable, aqueous aerosol of the hydrolysis and condensation products of this material may cause a chronic inflammatory reaction in the larynx., In vitro studies have shown this product not to be mutagenic, but a clastogenic effect was observed in cultured cells., The relevance of these findings to humans is unknown., Dermal hypersensitivity testing involving extensive injection and topical exposure (Guinea Pig Maximization Study) suggested a slight potential for sensitization., In a developmental study in rats, repeated oral gavage exposures to high concentrations during gestation resulted in significant maternal and fetal toxicity, including malformations. However, fetal effects were not observed in the absence of maternal toxicity. The no effect level for maternal and fetal effects was 0.5 ml/kg/day.

SKIN IRRITATION

Species: Rabbit.; Result: Slight irritation

EYE IRRITATION

Species: Rabbit. ; Result: Mild irritation

MUTAGENICITY

This material was negative in a bacterial mutagenicity assay (Ames test).

OTHER EFFECTS OF OVEREXPOSURE

No data available



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12. ECOLOGICAL INFORMATION

ECOTOXICOLOGY

All available ecological data have been taken into account for the development of the hazard and precautionary information contained in this Safety Data Sheet.

DISTRIBUTION

No data available

CHEMICAL FATE

No data available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD

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

14. TRANSPORT INFORMATION

Further Information:

This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

15. REGULATORY INFORMATION

Inventories

Korea Existing Chemicals Inventory (KECI)	y (Positive listing)
Japan Inventory of Existing & New Chemical Substances (ENCS)	y (Positive listing)
EU list of existing chemical substances	y (Positive listing)
Australia Inventory of Chemical Substances (AICS)	y (Positive listing)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	y (Positive listing)
TSCA list	y (Positive listing)
China Inventory of Existing Chemical Substances	y (Positive listing)
Canada DSL Inventory	y (Positive listing)



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Canada NDSL Inventory n (Negative listing)
For inventories that are marked as quantity restricted or special cases, please contact Momentive.

US Regulatory Information

SARA (311,312) HAZARD CLASS
Acute Health Hazard; Chronic Health Hazard

SARA (313) CHEMICALS

Canadian Regulatory Information

WHMIS HAZARD CLASS
D2A VERY TOXIC MATERIALS, D2B TOXIC MATERIALS

CALIFORNIA PROPOSITION 65
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

OTHER

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. C = ceiling limit NEGL = negligible EST = estimated NF = none found
NA = not applicable UNKN = unknown NE = none established REC = recommended ND = none determined
V = recommended by vendor SKN = skin TS = trade secret R = recommended
MST = mist NT = not tested STEL = short term exposure limit ppm = parts per million ppb = parts per billion
By-product= reaction by-product, TSCA inventory status not required under 40 CFR part 720.30(h-2).