

SilGrip* PSA529

SAFETY DATA SHEET

1. Identification

Product identifier: SilGrip* PSA529

Other means of identification

Synonyms: Pressure Sensitive Adhesive

Recommended use and restriction on use

Recommended use: Adhesive

Restrictions on use: For industrial use only.

Manufacturer/Importer/Distributor Information : Momentive Performance Materials LLC
260 Hudson River Road
Waterford NY 12188

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 2

Health Hazards

Skin Corrosion/Irritation Category 2

Toxic to reproduction Category 2

Specific Target Organ Toxicity -
Single Exposure Category 3¹.

Specific Target Organ Toxicity -
Repeated Exposure Category 2².

Target Organs

1. Narcotic effect.
2. Central nervous system.

Label Elements

Hazard Symbol:

SilGrip* PSA529



Signal Word: Danger

Hazard Statement: H225; Highly flammable liquid and vapor.
H315; Causes skin irritation.
H361fd; Suspected of damaging fertility. Suspected of damaging the unborn child.
H336; May cause drowsiness or dizziness.
H373; May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required.

Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. If skin irritation occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instructions on this label). IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. IF exposed or concerned: Get medical advice/attention. In case of fire: Use alcohol resistant foam for extinction.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Hazard(s) not otherwise classified (HNOC): 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.

3. Composition/information on ingredients

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Mixtures

Chemical Identity	CAS number	Content in percent (%)*	Notes
Toluene	108-88-3	20 - <50%	# This substance has workplace exposure limit(s).
Octamethylcyclotetrasiloxane	556-67-2	1 - <3%	No data available.

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

4. First-aid measures

- General information:** No action shall be taken involving any personal risk or without suitable training.
- Ingestion:** If swallowed, do NOT induce vomiting. Give a glass of water.
- Inhalation:** If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.
- Skin Contact:** Wash contaminated clothing before reuse. Wash with soap and water.
- Eye contact:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Most important symptoms/effects, acute and delayed

Symptoms: Aspiration into the lungs may occur during injection or vomiting, resulting in lung injury and may be fatal. Contains toluene. Stimulants such as epinephrine may induce ventricular fibrillation. The metabolism of other solvents may be inhibited resulting in a potentiation of toxic effects of those chemicals. Uptake is directly proportional to the amount of body fat. Blood levels may be cumulative when exposure is extended.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Treatment is symptomatic and supportive.

5. Fire-fighting measures

General Fire Hazards: Use standard firefighting procedures and consider the hazards of other involved materials. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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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.

Special protective equipment and precautions for fire-fighters

Special fire-fighting procedures: Move container from fire area if it can be done without risk. Cool fire-endangered containers with water.

Special protective equipment for fire-fighters: Flammable 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: Recommended storage in original container below 30°C (85°F). Keep container closed. Avoid inhalation of vapors and spray mists. Avoid contact with skin and eyes. Use only in well-ventilated areas. Keep out of reach of children. See Section 8 of the SDS for Personal Protective Equipment.

Methods and material for containment and cleaning up: Wear proper protective equipment as specified in the protective equipment section. Warn other workers of spill. Keep unauthorized personnel away. Wipe, scrape, or soak up in an inert material and put in a container intended for flammable materials for disposal.

7. Handling and storage

Precautions for safe handling: Sensitivity to static discharge is expected; material has a flash point below 200 F.

Conditions for safe storage, including any incompatibilities: Keep in a cool, well-ventilated place. Keep container tightly closed. Use original container or packaging of similar material of construction

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Toluene	TWA	20 ppm	US. ACGIH Threshold Limit Values, as amended (03 2015)

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	STEL	150 ppm	560 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	REL	100 ppm	375 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	TWA	100 ppm	375 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	STEL	150 ppm	560 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA	200 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
	Ceiling	300 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
	MAX. CONC	500 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
	TWA	100 ppm	375 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (06 2008)
	Ceiling	500 ppm		US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (01 2015)
	STEL	150 ppm	560 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (01 2015)
	TWA PEL	10 ppm	37 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (01 2015)
	IDLH	500 ppm		US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended (10 2017)
	STEL	150 ppm	580 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (01 2019)
	LEL		1.1 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended (07 2020)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Toluene (o-Cresol, with hydrolysis: Sampling time: End of shift.)	0.3 mg/g (Creatinine in urine)	ACGIH BEI (03 2015)
Toluene (toluene: Sampling time: Prior to last shift of work week.)	0.02 mg/l (Blood)	ACGIH BEI (03 2015)
Toluene (toluene: Sampling time: End of shift.)	0.03 mg/l (Urine)	ACGIH BEI (03 2015)

Appropriate Engineering Controls

Eye wash facilities and emergency shower must be available when handling this product.

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 Monogoggles

Skin Protection

Hand Protection: Nitrile gloves are recommended.

Other: rubber overcoat

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Respiratory Protection: If inhalation exposure is expected, 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: No data available.

9. Physical and chemical properties

Appearance

Physical state: liquid
Form: liquid
Color: Colorless
Odor: Aromatic
Odor threshold: No data available.
pH: Not applicable
Melting point/freezing point: No data available.
Initial boiling point and boiling range: 111 °C (1.013 hPa)
Flash Point: ca. 1.6 °C (Tagliabue Closed Cup)
Evaporation rate: No data available.
Flammability (solid, gas): No data available.
Upper/lower limit on flammability or explosive limits
Flammability limit - upper (%): ca. 7.0 %(V)
Flammability limit - lower (%): ca. 1.2 %(V)
Explosive limit - upper: No data available.
Explosive limit - lower: No data available.
Heat of combustion: No data available.
Vapor pressure: 22 hPa
Vapor density: ca. 3.2
Density: 0.9826 g/cm³
Relative density: ca. 0.99
Solubility(ies)
Solubility in water: Negligible
Solubility (other): Soluble in toluene
Partition coefficient (n-octanol/water) Log Pow: No data available.
Auto-ignition temperature: ca. 536 °C
Decomposition temperature: No data available.
SADT: No data available.
Viscosity, dynamic: No data available.
Viscosity, kinematic: > 21 mm²/s (20 °C)
VOC: 435 g/l ;

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10. Stability and reactivity

Reactivity:	No dangerous reaction if used as recommended.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Keep away from sources of ignition - No smoking.
Incompatible Materials:	Oxidizing agents.
Hazardous Decomposition Products:	Carbon dioxide Silicon dioxide. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

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:	Not classified for acute toxicity based on available data.
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Specified substance(s):

Toluene LD 50 (Rat): > 5,000 mg/kg

Octamethylcyclotetrasiloxane LD 50 (Rat): > 4,800 mg/kg

Dermal

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

Specified substance(s):

Toluene LD 50 (Rabbit): 12,124 mg/kg

Octamethylcyclotetrasiloxane LD 50 (Rat): > 2,375 mg/kg

Inhalation

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

Specified substance(s):

Toluene LC50 (Rat): 30.6 mg/l

Octamethylcyclotetrasiloxane LC50 (Rat): 36 mg/l

Repeated dose toxicity

Product: No data available.

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

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

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane
Ames-Test (OECD-Guideline 471 (Genetic Toxicology: Salmonella typhimurium, Reverse Mutation Assay)): negative (not mutagenic)
Mouse Lymphoma Assay (OECD Guideline 476): negative (not mutagenic)

In vivo

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane
Chromosomal aberration (OECD-Guideline 474 (Genetic Toxicology: Micronucleus Test)) Inhalation (Rat, male and female): 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.

Target Organs

Specific Target Organ Toxicity - Single Exposure: Narcotic effect.

Specific Target Organ Toxicity - Repeated Exposure: Central nervous system.

Aspiration Hazard

Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Toluene
LC0 (Leuciscus idus, 48 h): 52 mg/l
LC50 (Leuciscus idus, 48 h): 70 mg/l
LC50 (Pimephales promelas, 96 h): 34 mg/l

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Octamethylcyclotetrasiloxane LC50 (Oncorhynchus mykiss, 96 h): > 0.022 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Toluene LC0 (Daphnia magna): 93 mg/l
(Daphnia magna): 270 mg/l

Octamethylcyclotetrasiloxane EC50 (Daphnia magna, 48 h): > 0.015 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane NOEC (Oncorhynchus mykiss, 93 d): \geq 0.0044 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane NOEC (Daphnia magna, 21 d): > 0.015 mg/l

Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane ErC50 (Selenastrum capricornutum, 96 h): > 0.022 mg/l

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane 3.7 % (29 d, 310 Ready Biodegradability - CO₂ in Sealed Vessels (Headspace Test)) Not readily biodegradable.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

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Specified substance(s):

Octamethylcyclotetrasiloxane Fathead Minnow, Bioconcentration Factor (BCF): 12.40

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Toluene No data available.
Octamethylcyclotetrasiloxane No data available.

Other adverse effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of according to all federal, state and local applicable regulations.

Contaminated Packaging: Dispose of as unused product.

14. Transport information

DOT

UN number or ID number: UN 1866
UN Proper Shipping Name: Resin solution
Transport Hazard Class(es)
Class: 3
Label(s): 3
Packing Group: II
Marine Pollutant: No

IMDG

UN number or ID number: UN 1866
UN Proper Shipping Name: RESIN SOLUTION
Transport Hazard Class(es)
Class: 3
Label(s): 3
EmS No.: F-E, S-E
Packing Group: II
Marine Pollutant: No
Limited quantity 5.00L
Excepted quantity E2

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IATA

UN number or ID number:	UN 1866
Proper Shipping Name:	Resin solution
Transport Hazard Class(es):	
Class:	3
Label(s):	3
Packing Group:	II
Cargo aircraft only Packing	364
Instructions:	
Passenger and cargo aircraft	364
Packing Instructions:	
Limited quantity:	Y341
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)

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Octamethylcyclotetrasiloxane	The minimum concentration: TSCA 4: 1.0% One-Time Export Notification only.

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), as amended

<u>Chemical Identity</u>	<u>OSHA hazard(s)</u>
Toluene	Causes mild skin irritation.; Systemic effects
Decamethylcyclopentasiloxane	Causes mild skin irritation.; Respiratory hazard.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Toluene	1,000 lbs.

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Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Flammable (gases, aerosols, liquids, or solids)
Skin Corrosion or Irritation
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
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

US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (TRI) Reporting

<u>Chemical Identity</u>	<u>Reporting threshold for other users</u>	<u>Reporting threshold for manufacturing and processing</u>
Toluene		

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

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Toluene	Reportable quantity: 1000 lbs.

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, Benzene, which is [are] known to the State of California to cause cancer and 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
Functional silicone fluid
Toluene
RARE EARTH OCTOATE SALTS

US. Massachusetts RTK - Substance List

Chemical Identity
Toluene
Benzene

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US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Toluene

US. Rhode Island RTK

Chemical Identity

Toluene

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Inventory Status:

Australia AICS:	y (positive listing)	Remarks: None.
EU EINECS List:	y (positive listing)	Remarks: None.
Japan (ENCS) List:	y (positive listing)	Remarks: None.
China Inventory of Existing Chemical Substances:	y (positive listing)	Remarks: None.
Korea Existing Chemicals Inv. (KECI):	y (positive listing)	Remarks: None.
Canada DSL Inventory List:	y (positive listing)	Remarks: None.
Canada NDSL Inventory:	n (negative listing)	Remarks: None.
New Zealand Inventory of Chemicals:	y (positive listing)	Remarks: None.
Philippines PICCS:	y (positive listing)	Remarks: None.
US TSCA Inventory:	y (positive listing)	Remarks: Commercial Status: Active
Taiwan. Taiwan inventory (CSNN):	y (positive listing)	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	3	
Physical Hazards	0	
PERSONAL PROTECTION		

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

Issue Date: 05/04/2022

Revision Date: No data available.

Version #: 2.2

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Further Information: No data available.

Disclaimer:

Notice to reader

Unless otherwise specified in section 1, Momentive products are intended for use in the manufacture and/or formulation of products and are not intended for direct consumer use. These products are not intended for long-lasting (> 30 days) implantation, injection or direct ingestion into the human body, nor for use in the manufacture of multiple use contraceptives. Keep out of the reach of children.

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 safe handling, 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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SRC18

SAFETY DATA SHEET

1. Identification

Product identifier: SRC18

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

Label Elements

Hazard Symbol:

SRC18



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. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

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

Storage: Store in a well-ventilated place. Keep cool. Store locked up.

Disposal: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Hazard(s) not otherwise classified (HNOC): 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

SRC18

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: Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Use standard firefighting procedures and consider the hazards of other involved materials. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

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. Acute overexposure to the products of combustion may result in irritation of the respiratory tract. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

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.

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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.

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:

Protective gloves made of : Neoprene Nitrile rubber. Polyvinyl chloride (PVC).

Other:

Safety shoes Wear suitable protective clothing.

Respiratory Protection:

If inhalation exposure is expected, 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

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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:	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.

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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.

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: LD50 (Rat): 1,490 mg/kg
ATEmix : 503.63 mg/kg

Dermal

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

Inhalation

Product: LD50 (Rat):

Repeated dose toxicity

Product: No data available.

Specified substance(s):

gamma-Aminopropyltriethoxysilane
NOAEL (Rat): 200 mg/kg/d

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Skin Corrosion/Irritation

Product: No data available.

Serious Eye Damage/Eye Irritation

Product: No data available.

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

gamma-Aminopropyltriethoxysilane Böhler-Patch-Test skin sensitisation on guinea pigs, OECD-Guideline 406 (Skin Sensitisation) (Guinea Pig): Sensitizing

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: No data available.

In vivo

Product: No data available.

Specified substance(s):

gamma-Aminopropyltriethoxysilane Micronucleus test (mouse) (Similar to OECD 474): negative (not mutagenic)

Reproductive toxicity

Product: Not classified

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

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Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

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: LC 50 (96 h): > 110 mg/l

Aquatic Invertebrates

Product: EC50 (Daphnia, 48 h): > 100 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 (72 h): > 3.6 mg/l

Persistence and Degradability

Biodegradation

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Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

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 or ID 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 or ID 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 or ID 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.

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), as amended

<u>Chemical Identity</u>	<u>OSHA hazard(s)</u>
gamma-Aminopropyltriethoxysilane	Toxic by ingestion; Corrosive to eyes

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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

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

US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (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

Ethanol

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.

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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: Commercial Status: Active
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	3
Flammability	2
Physical Hazards	2
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: 03/09/2022
Revision Date: No data available.
Version #: 5.0
Further Information: No data available.
Disclaimer:

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Further Information

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