

SRC 18

SAFETY DATA SHEET

1. Identification

Product identifier: SRC 18

Other means of identification

Synonyms: AMINOPROPYLTRIETHOXSILANE

Recommended use and restriction on use

Recommended use: Catalyst

Restrictions on use: Not known.

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

Health Hazards

Acute toxicity (Oral)	Category 4
Skin Corrosion/Irritation	Category 1B
Serious Eye Damage/Eye Irritation	Category 1
Skin sensitizer	Category 1
Specific Target Organ Toxicity - Single Exposure	Category 3 ¹ .
Specific Target Organ Toxicity - Repeated Exposure	Category 1 ² .

Target Organs

1. respiratory tract irritation
2. Kidneys, Skin

Label Elements

Hazard Symbol:

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Signal Word:	Danger
Hazard Statement:	H302; Harmful if swallowed. H314; Causes severe skin burns and eye damage. H317; May cause an allergic skin reaction. H335; May cause respiratory irritation. H372; Causes damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
Precautionary Statements	
Prevention:	Wear protective gloves. Wear eye protection/face protection. Wear protective clothing. Use only outdoors or in a well-ventilated area. Do not breathe vapors. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
Response:	Get medical advice/attention if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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 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:	<p>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.</p> <p>Also, perforation of the esophagus or stomach may occur, leading to mediastinitis or peritonitis and the resultant complications.</p> <p>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).</p> <p>- burning sensation</p>
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Hazards:	No data available.
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Indication of immediate medical attention and special treatment needed

Treatment:	DO NOT induce vomiting. Get medical attention immediately. Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water.
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5. Fire-fighting measures

General Fire Hazards: Use standard firefighting procedures and consider the hazards of other involved materials.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Foam. Carbon dioxide Sodium chloride

Unsuitable extinguishing media: water jet

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: All equipment used when handling the product must be grounded.

Special protective equipment for fire-fighters: Reacts violently with water. Wear appropriate personal protective equipment. 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: Avoid contact with skin and eyes. Avoid inhalation of vapors and spray mists. Keep out of reach of children. Attention: Not for injection into humans. May generate formaldehyde at temperatures greater than 150 C(300 F). See Section 8 of the SDS for Personal Protective Equipment.

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.

7. Handling and storage

Precautions for safe handling: Sensitivity to static discharge is not expected. Do not taste or swallow. Avoid prolonged or repeated contact with skin. Avoid breathing mists or vapors. Use only in well-ventilated areas. Wash thoroughly 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:

Face shield Safety glasses with side-shields conforming to EN166

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:

ca. 7

Melting point/freezing point:

not applicable

Initial boiling point and boiling range:

217.00 °C

Flash Point:

104.00 °C (Tagliabue Open Cup)

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Evaporation rate:	No data available.
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:	Approximate 133 hPa
Vapor density:	No data available.
Density:	ca. 0.943 g/cm ³
Relative density:	0.94
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.
Viscosity, dynamic:	No data available.
Viscosity, kinematic:	No data available.
VOC:	947 g/l ; ;

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerisation does not occur.
Conditions to avoid:	Keep away from any contact with water.
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. 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: ATEmix: 502.51 mg/kg

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: No data available.

Specified substance(s):

gamma-
Aminopropyltriethoxysilane
NOAEL (Rat, Oral, 90 d): 200 mg/kg

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Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

gamma-Aminopropyltriethoxysilane	OECD-Guideline 404 (Acute Dermal Irritation/Corrosion) (Rabbit, 4 h): Corrosive
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Serious Eye Damage/Eye Irritation

Product: No data available.

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

gamma-Aminopropyltriethoxysilane	(Guinea Pig)positive
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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):

No carcinogenic components identified

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Germ Cell Mutagenicity

In vitro

Product: No data available.

Specified substance(s):

gamma-
Aminopropyltriethoxysilane
Ames-Test: negative
Chinese Hamster Ovary (CHO): negative

In vivo

Product: No data available.

Specified substance(s):

gamma-
Aminopropyltriethoxysilane
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.

Target Organs

Specific Target Organ Toxicity - Single Exposure: respiratory tract irritation
Specific Target Organ Toxicity - Repeated Exposure: Kidneys, Skin

Aspiration Hazard

Product: No data available.

Other effects:

This product reacts with water or moisture to form ethanol. Repeated ingestion of ethanol by pregnant women has been shown to cause birth defects in their infants (Fetal Alcohol Syndrome). The International Agency for Research on Cancer (IARC) has determined that long term ingestion of ethanol causes the development of malignant tumors in the oral cavity, pharynx, larynx, esophagus and liver in humans.

Severe eye irritation

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

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Specified substance(s):

gamma-aminopropyltriethoxysilane LC50 (Brachydanio rerio, 96 h): > 934 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

gamma-aminopropyltriethoxysilane 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: No data available.

Specified substance(s):

gamma-aminopropyltriethoxysilane 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: No data available.

Specified substance(s):

gamma-aminopropyltriethoxysilane 67 % (28 d) Not readily degradable. hydrolyses

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

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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

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

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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:	0.50L
Packing Instructions:	Y840
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

Immediate (Acute) Health Hazards

Delayed (Chronic) Health Hazard

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>
gamma-Aminopropyltriethoxysilane	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.

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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

No ingredient regulated by CA Prop 65 present.

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

Chemical Identity

gamma-Aminopropyltriethoxysilane

Ethanol

Octamethylcyclotetrasiloxane

Decamethylcyclopentasiloxane

Dodecamethylcyclohexasiloxane

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="1"/>
Physical Hazards	<input type="text" value="1"/>
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: 01/18/2018

Revision Date: No data available.

Version #: 3.0

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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