



OSI SPECIALTIES

MATERIAL SAFETY DATA SHEET

Product name: Silquest® RC-2 silane

MSDS Number: 1559

Revision: 1.3 11/30/2000

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Silquest® RC-2 silane

Chemical name: Organosilicon chemical

Supplier: Crompton Corporation
One American Lane
Greenwich, CT 06831-2559, USA

Emergency telephone number: CHEMTREC (24 hours) 800-424-9300
Crompton Corporation Emergency Response (24 hours)
800-809-9998
Crompton Corporation Emergency Response (24 hours)
304-926-8418

For MSDS, Product Safety, or regulatory inquiries, call: Mr. Dana Dalrymple 304-652-8446 / (fax) 304-652-1478

Customer Service: 800-523-5862

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS#	CONCENTRATION
Polysulfide silanes	Trade secret	> 99.0 %
Ethanol	64-17-5	< 0.5 %

Note(s): Additional ethanol may be formed by reaction with moisture.
See Section 15 for chemicals appearing on Federal or State Right-To-Know lists.

MARKETED BY

HARWICK STANDARD
DISTRIBUTION CORPORATION
60 S. Seiberling Street • Akron, Ohio 44305

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3. HAZARDS IDENTIFICATION

APPEARANCE

Physical state	Viscous fluid
Color	Black
Odor	Mild

EMERGENCY OVERVIEW

CAUTION!

COMBUSTIBLE.

POTENTIAL HEALTH EFFECTS

Swallowing

Acute effects

This product hydrolyses in the stomach to form ethanol.

May cause the following effects:

- dizziness, faintness, drowsiness, decreased awareness and responsiveness, euphoria, abdominal discomfort, nausea, vomiting, staggering gait, lack of coordination and coma

Effects of repeated overexposure

Long-term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis.

Skin absorption

Acute effects

No evidence of harmful effects from available information.

Inhalation

Acute effects

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

Skin contact

Acute effects

May cause minor irritation.

May cause the following effects:

- itching
- slight local redness

Eye contact

Acute effects

No evidence of harmful effects from available information.

Medical conditions aggravated by overexposure

Repeated exposure to ethanol may aggravate liver injury produced from other causes.

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Other effects of overexposure

Repeated ingestion of ethanol by pregnant mothers has been shown to adversely affect the central nervous system of the fetus, producing a collection of effects which together constitute the fetal alcohol syndrome. These include mental and physical retardation, disturbances of learning, motor and language deficiencies, behavioral disorders, and small size head.

POTENTIAL ENVIRONMENTAL EFFECTS

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

4. FIRST AID MEASURES

Swallowing

If patient is fully conscious, give two glasses of water. Induce vomiting. Obtain medical attention.

Skin

Wash skin with soap and water.

Inhalation

No emergency care anticipated.

Eye contact

Flush eyes thoroughly with water for several minutes.

Notes to physician

Symptoms vary with the alcohol level of the blood. Mild alcohol intoxication occurs at blood levels between 0.05%-0.15% and approximately 25% of individuals will show signs of intoxication at these levels. Above 0.15% the person is definitely under the influence of ethanol and 50%-95% of individuals at this level are clinically intoxicated. Severe poisoning occurs when the blood ethanol level is 0.3%-0.5%. Above 0.5% the individual will be comatose and death can occur. The unabsorbed ethanol should be removed by gastric lavage after intubating the patient to prevent aspiration. Avoid the use of depressant drugs or the excessive administration of fluids. In the presence of hypoglycemia, administer 5%-10% glucose intravenously, plus thiamine 100 mg intramuscularly. Hemodialysis is indicated if the ethanol concentration in the blood is above 5 mg/ml. Naloxone may be useful to reverse clinical alcoholic coma and 0.4-1.2 mg intravenously may arouse ethanol-intoxicated patients.

5. FIRE-FIGHTING MEASURES

Flash point: 55 °C (132 °F)**Flammable limits**

Lower limit:

Not available

Upper limit:

Not available

Special fire fighting procedures

None.

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Special protective equipment for firefighters

Use self-contained breathing apparatus when fighting fires in enclosed areas.

Extinguishing media

Suitable: Large fires:
- alcohol-type foam or universal-type foams
Small fires:
- CO2
- dry chemical

Unsuitable: None.

Unusual fire and explosion hazards

None known.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear suitable protective equipment.

Environmental precautions

Expected to be toxic to fish. Avoid discharge to sewers or natural waters. May create an offensive odor. Expected to be resistant to rapid biodegradation.

Methods for cleaning up

Cover with absorbent or contain.
Collect for disposal.
Observe government regulations.

7. HANDLING AND STORAGE

HANDLING

Handling precautions

Normal precautions should be followed in handling and use.

STORAGE

Storage requirements

Keep away from heat and flame.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTION

Respiratory protection

None expected to be needed.

Hand protection / protective gloves

Recommended order of use:

4H

Butyl

Neoprene

Nitrile (NBR)

PVC-coated

Eye protection

Safety glasses.

Other protective equipment

Eye bath

Safety shower

ENGINEERING CONTROLS

Ventilation

General (mechanical) room ventilation is expected to be satisfactory.

EXPOSURE LIMITS

<u>Component</u>	<u>Type</u>	<u>Value</u>	<u>Remark</u>
Ethanol	TWA, OSHA	1,000.0 ppm	
	TWA, ACGIH	1,000.0 ppm	

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Physical state

Viscous fluid

Color

Black

Odor

Mild

OTHER PROPERTIES

Boiling point

> 150 °C at STP unless specified below.
Mixture

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Melting point	< 0 °C at STP unless specified below.
pH	Not available
Specific gravity (H₂O=1)	1.1000 at 25 °C (1,013 hPa)
Vapor pressure	< 1.33 hPa (1.00 mmHg) at 20 °C
Vapor density (air=1)	Heavier than air
Solubility in water	Reacts slowly
Evaporation rate (Butyl Acetate=1)	< 1
Flash point	55.5 °C (132 °F) Method: Pensky-Martens closed cup ASTM D 93
Upper explosion limits	Not available
Lower explosion limits	Not available
Percent volatiles	Not determined
Molecular weight	Mixture

10. STABILITY AND REACTIVITY

Stability: Stable.

Stability - Conditions to avoid
None known.

Incompatible materials
Reacts with water or moisture to form:
Ethanol.

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

Hazardous polymerization: Will not occur.

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Product name: Silquest® RC-2 silane**MSDS Number:** 1559**Revision:** 1.3 11/30/2000**Page:** 7 of 9**Hazardous polymerization - Conditions to avoid**
None known.

11. TOXICOLOGICAL INFORMATION

SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH

The following information is based on ethanol:

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

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

13. DISPOSAL CONSIDERATIONS

General: Incinerate in a furnace where permitted under appropriate Federal, State, and local regulations.

14. TRANSPORT INFORMATION

DOT Classification

Not regulated by ground or rail if shipped or transported in containers less than 450 liters.

Proper shipping name: COMBUSTIBLE LIQUID, N.O.S. (organosilicone chemical)
Class: COMBUSTIBLE LIQUID
UN ID #: NA1993
Packing group: III
Freight description road: CHEMICALS, NOIBN

IMDG Classification

Proper shipping name: FLAMMABLE LIQUID, N.O.S. (organosilicone chemical)
Class: 3.3
UN ID #: UN 1993
Packing group: III

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ICAO Classification

Proper shipping name: FLAMMABLE LIQUID, N.O.S. (organosilicone chemical)
 Class: 3
 UN ID #: UN 1993
 Packing group: III

15. REGULATORY INFORMATION

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of hazardous substances equal to or greater than the reportable quantities (RQ's) in 40CFR302.4.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQ's) and release reporting based on Reportable Quantities (RQ's) in 40CFR355 (used for SARA 302 and 304).

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40CFR372 (for SARA 313). This information must be included in MSDS's that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Massachusetts Right-To-Know Substance List (MSL)--Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Pennsylvania Right-To-Know Hazardous Substance List--Hazardous Substances and Special Hazardous Substances on the list must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

New Jersey Worker and Community Right-To-Know Act (Labeling Requirements)

Chemical name
Sulfurated aralkylalkoxysilanes

CAS#
Trade secret

New Jersey TS Number
NJ Reg# 26175-10255P,
-22056P

Aralkyltrialkoxysilanes

Trade secret

NJ Reg# 26175-10256P

EPA Hazard Categories (SARA 311, 312): Fire Hazard

California Proposition 65

This product contains no levels of listed substances, which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute.

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California SCAQMD Rule 443.1 VOC's

Volatile Organic Components (VOC's) = Substances with vapor pressure of \Rightarrow 0.5 mmHg at 104°C (219.2F).

This product contains 179.4 g/liter VOC's.

CHEMICAL INVENTORY

Europe: The ingredients of this mixture are on the EINECS inventory.

United States: The ingredients of this product are listed on the TSCA inventory or are exempt.

16. OTHER INFORMATION

RECOMMENDED USES AND RESTRICTIONS

Please consult the product and/or application information bulletins for this product.

HMIS RATING

Health: 1	Flammability: 2	Reactivity: 1	PPI: X
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LEGEND

STP	Standard temperature and pressure
W/W	Weight/Weight
0 (HMIS)	Minimal hazard
1 (HMIS)	Slight hazard
2 (HMIS)	Moderate hazard
3 (HMIS)	Serious hazard
4 (HMIS)	Severe hazard
X (HMIS)	Personal protection rating to be supplied by user depending on use conditions

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The opinions expressed herein are those of qualified experts within Crompton Corporation. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and of these opinions and the conditions of use of this product are not within the control of Crompton Corporation, it is the user's obligation to determine the conditions of safe use of the products.