



All-Sil

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: N/A

Date of Issue: 08/14/2015

Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Paste

Product Name: All-Sil

Product Code: 2144

Intended Use of the Product

Silicone elastomer. For professional use only.

Name, Address, and Telephone of the Responsible Party

Manufacturer

The Garland Company, Inc.
3800 East 91st Street
Cleveland, Ohio 44105-2197
T-800-762-8225
F-216-641-0633
www.garlandco.com

Supplier

The Garland Company, Inc.
3800 East 91st Street
Cleveland, Ohio 44105-2197
T-800-762-8225
F-216-641-0633

The Garland Company, Inc.
209 Carrier Drive
Toronto, Ontario M9W 5Y8
T-416-747-7995 800-387-5991
F-416-747-1980

Emergency Telephone Number

Emergency Number: 1-800-262-8200 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Skin Irrit. 1	H317
Eye Irrit. 2A	H319
Tox. Fert. 2	H361
STOT RE 2	H373

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

Hazard Statements (GHS-US)

- : Warning
- : H317-May cause an allergic skin reaction.
H319 – Causes serious eye irritation.
H361-Suspected of damaging fertility or the unborn child.
H373-May cause damage to organs through prolonged or repeated exposure by route of exposure if conclusively proven that no other route.

Precautionary Statements (GHS-US)

- : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe vapor.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P281 - Use personal protective equipment as required.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 - IF exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313 - If eye irritation persists: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container to an approved waste disposal plant.

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not available

Mixture

Name	Product identifier	% (w/w)
Methyloximesilane	Proprietary	1 - < 3
Vinyloximesilane	Proprietary	< 1
Alkoxysilane	Proprietary	< 1
Octamethylcyclotetrasiloxane	(CAS No) 556-67-2	< 1
Methylethylketoxime	(CAS No) 96-29-7	< 1

Full text of H-Phrases: See Section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

First-aid Measures General: If exposed or concerned: Get medical advice / attention. Ensure that medical personnel are aware materials involved and take precautions to protect themselves. Wash contaminated clothing before reuse.

First-aid Measures After Inhalation: Remove to fresh air. Call a physician if symptoms develop or persist.

First-aid Measures After Skin Contact: Wash off with soap and plenty of water. For minor skin contact, avoid spreading material on unaffected skin. If skin irritation or rash occurs: get medical attention / advice. Take off contaminated clothing and wash before use.

First-aid Measures After Eye Contact: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

First-aid Measures After Ingestion: Wash out mouth with water provided person is conscious. Get medical attention immediately.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Foam. Dry powder. Dry chemical. Carbon dioxide (CO₂).

Unsuitable Extinguishing Media: None known.

Special Hazards Arising From the Substance or Mixture

Keep product and empty container away from heat and sources of ignition.

Advice for Firefighters

Protection During Firefighting: Firefighters must use standard protective equipment including flame retardant coat, helmet, gloves, rubber boots and self-contained breathing apparatus.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Do not touch or walk through spilled material. Ensure adequate ventilation. Wear appropriate personal protective equipment.

Environmental Precautions

Prevent further leakage or spillage if safe to do so.

Methods and Material for Containment and Cleaning Up

Dike the spilled material, where this is possible.

Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up product and place into a container for later disposal. Wipe up with absorbent material (e.g. cloth). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for reuse.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Precautions for Safe Handling: Provide adequate ventilation. Use care in handling/storage. Obtain special instructions before use.

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Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Avoid contact with eyes. Avoid contact with skin.

Hygiene Measures: Stored locked up. Keep container tightly closed. Keep out of reach of children. Store in a cool, dry place out of direct sunlight. Keep in original container.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Keep in properly labeled containers. Keep tightly closed in a dry and cool place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Components	CAS #	Type	Value
Methylethylketoxime (impurity)	96-29-7	TWA	36 mg/m3

Vendor guide Components

Methylethylketoxime (impurity)	96-29-7	STEL	10 ppm
TWA		3 ppm	

Biological limit values:

No biological exposure limits for the ingredient(s).

Appropriate engineering controls:

Provide adequate general and local exhaust ventilation. Provide eyewash station. Pay attention to ventilation such as local exhaust, mechanical and or / door open for at least 24 hours after application.



Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas.

Hand Protection: Protective gloves.

Eye Protection: Tightly fitting safety goggles.

Skin and Body Protection: Long sleeved clothing. Chemical resistant apron. Impervious butyl rubber gloves. Break through time. Lightweight protective clothing. Antistatic boots.

Other Information: When using, do not eat, drink, or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Paste
Appearance	: Clear
Odor	: Oxime odor
Odor Threshold	: Not available
pH	: Not available
Relative Evaporation Rate (butyl acetate = 1)	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: 204.8 F° (96°C) Closed cup
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Negligible (25°C)
Relative Vapor Density at 68°F (20°C)	:
Relative Density	: 1.04 (25°C)
Specific Gravity	: Not available
Solubility	: Not soluble
Partition coefficient: n-octanol/water	: Not available
Viscosity	: Not applicable
Explosion Data – Sensitivity to Mechanical Impact	: Not available

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Explosion Data – Sensitivity to Static Discharge : Not available

Volatile Organic Compounds : 40 g/L

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to Avoid: None known

Incompatible Materials: Strong oxidizing agents. Water and moisture.

Hazardous Decomposition Products: This product reacts with water, moisture, or humid air to evolve following compounds.

Methylethylketoxime. Refer to section 8: exposure controls / personal protection and section 11: toxicological information.

Thermal breakdown of this product during fire or very high heat condition may evolve the following hazardous decomposition product: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Nitrogen oxides. Formaldehyde.

SECTION 11: TOXICOLOGICAL INFORMATION

Information On Toxicological Effects - Product

Symptoms/Injuries After Inhalation: No significant effects are expected.

Symptoms/Injuries After Skin Contact: May cause an allergic reaction.

Symptoms/Injuries After Eye Contact: Causes serious eye irritation.

Symptoms/Injuries After Ingestion: No significant effects are expected.

Symptoms related to the physical, chemical and toxicological characteristics: Dermatitis. Rash. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision. May cause an allergic skin reaction.

Information on Toxicological Effects – Ingredient(s)

LD50 and LC50 Data

Alkoxysilane (Proprietary)	
LD50 Oral Rat	2,400 – 2,995mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg
LC50 Inhalation Rat	1.49-2.44 mg/L Rat 4 h
Methylethylketoxime (impurity) (96-29-7)	
LD50 Dermal Rabbit	200 ul/kg
LC50 Oral Rat	930 mg/kg

Skin corrosion / irritation:

Skin-Rabbit: Moderately irritating (alkoxysilane)

Skin-Rabbit: 500 mg/24hr.MILD

(Octamethylcyclotetrasiloxane)

Serious eye damage/eye irritation:

Causes serious eye damage. (vinylloximesilane)
(methylethylketoxime)

Eye – Rabbit: 15mg SEVERE (alkoxysilane)

Causes serious eye irritation.

Eye – Rabbit: MILD (Octamethylcyclotetrasiloxane)

Not available.

Respiratory Sensitization:

Skin Sensitization:

May cause and allergic skin reaction. (Methyloximesilane)

(Vinylloximesilane) (Methylethylketoxime).

Positive (Guinea Pig) (alkoxysilane)

No evidence of sensitization (Octamethylcyclotetrasiloxane)

Negative (Ames test, Chromosome analysis, Micronucleus test) (Alkoxysilane).

Negative (Bacteria) (Octamethylcyclotetrasiloxane)

Suspected of causing cancer. (Methylethylketoxime)

Not listed

Germ Cell Mutagenicity:

Carcinogenicity:

OSHA Specifically

Regulated Substances (29 CFR 1910.1001-1050):

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Reproductive Toxicity:

Octamethylcyclotetrasiloxane administered to rats by whole body inhalation at concentrations of 500 and 700 ppm for 70 days prior to mating, through mating, gestation and lactation resulted in decreases in live litter size. Additionally, increases in the incidence of deliveries of offspring extending over an unusually long time period (dystocia) were observed at these concentrations. Statistically significant alterations in these parameters were not observed in the lower concentrations evaluated (300 and 70 ppm). In a previous range-finding study, rats exposed to vapor concentrations of 700 ppm had decreases in the number of implantation sites and live litter size. The significance of these findings to humans is not known. (Octamethylcyclotetrasiloxane)

Developmental toxicity: NOEL 500 mg/kg/day (rat),
maternal toxicity: NOEL 500 mg/kg/day (rat) (alkoxysilane)
Not available

Specific target organ toxicity – single source:

Specific target organ toxicity – repeated exposure:

May cause damage to the following organs through prolonged exposure.

Cardiovascular / Hematological: Hematopoiesis.

Cardiovascular / Hematological: Hematopoiesis. (methyloximesilane)

Repeated inhalation or oral exposure of mice and rice to Octamethylcyclotetrasiloxane produced an increase in liver size.

No gross histopathological or significant clinical chemistry effects were observed. An increase in liver metabolizing enzymes, as well as a transient increase in the number of normal cells (hyperplasia) followed by an increase in cell size (hypertrophy) were determined to be the underlying causes of the liver enlargement. The biochemical mechanisms producing these effects are highly sensitive in rodents, while similar mechanisms in humans are insensitive. A two year combined chronic and carcinogenicity assay was conducted on Octamethylcyclotetrasiloxane. Rats were exposed by whole-body vapor inhalation 6hrs /day, 5 days a week for up to 104 weeks to 0, 10, 30, 150 or 700 ppm of Octamethylcyclotetrasiloxane. The increase in incidence of (uterine) endometrial cell hyperplasia and uterine adenomas (benign tumors) were observed in female rats at 700 ppm. Since these effects only occurred at 700 ppm, a level that greatly exceeds typical workplace or consumer exposure, it is unlikely that industrial, commercial or consumer uses of products containing Octamethylcyclotetrasiloxane would result in a significant risk to humans. (Octamethylcyclotetrasiloxane).

Aspiration hazard:

Not available

Chronic effects:

Not available

Further Information:

Methylethylketoxime (MEKO). Material will generate MEKO upon exposure to humid air gradually. Male rodents exposed to MEKO vapor at high concentration throughout their lifetime developed liver cancer. But relevance to humans is uncertain now. Please read the detail information to MEKO below.

- **Skin Irritation:** Causes mild irritation. Can be absorbed through skin.
- **Eye Irritation:** Causes severe irritation.
- **Acute Oral Tox:** LD50(rat) = >900mg/kg
- **Acute Dermal Tox:** LD50(rabbit)=>1000mg/kg
- **Acute Inhalation Tox:** LC50 (rat) >4.83 mg/l/4hr
- **Inhalation Tox:** Shows narcotic action at high concentration. May produce blood effects.
- **Skin Sensitization:** Positive (guinea pig)
- **Neurotoxicity:** High dose can produce transient and reversible change in neurobehavioral function.

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-**Carcinogenicity:** Liver carcinomas were observed in a lifetime inhalation study (ca.2 years) in which mice and rats were exposed.

-**Other Chronic Study:** Degenerative effects on the olfactory epithelium of nasal passages occurred in a concentration related manner in males and females of mice and rats at MEKO concentration of 15, 75 and 375 ppm. The significant change in hematological parameters were observed at 404 ppm concentration.

-**Workplace Environmental Exposure Level:** Vendor guide: 3 ppm(TWA), 10ppm(STEL), AIHA WEEL: 10 ppm(TWA).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity

- Alkoxysilane: Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

- Octamethylcyclotetrasiloxane: May cause long lasting harmful effects to aquatic life.

	Components	Species	Test Results
Alkoxysilane (CAS proprietary)			
Aquatic			
Algae	EbC50	Green Algae (Selenastrum capornutum)	5.5 mg/l, 72 hr
	ErC50	Green Algae (Selenastrum)	8.8 mg/l, 72 hr
Crustacea	EC50	Water Flea (Daphnia magna)	90 mg/l, 48 hr
Fish	LC50	Bluegill (Leponis macrochirus)	> 100 mg/l, 96 hr
		Flathead minnow Pimephales Promelas)	100 mg/l, 96 hr
		Rainbow Trout	> 100 mg/l, 96 hr
Methylethylketoxime (impurity) (CAS 96-29-7)			
Aquatic			
Fish	LC50	Flathead minnow (Pimephales Promelas)	777 -914 mg/l, 96 hr

Persistence and degradability: Causes easily hydrolysis in water or atmosphere. (alkoxysilane)

Bioaccumulative potential: Bio concentration Factor (BCF) / (Flathead minnow): 12400 Octamethylcyclotetrasiloxane.

Mobility in Soil: Not available.

Other adverse effects: Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Can be land-filled for cured product or burned in a chemical incinerator equipped with an afterburner and scrubber. Do not dispose the emptied container unlawfully. Observe all federal, state & local laws.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT

Special Instructions : Not regulated

Proper Shipping Name :

Hazard Class :

Identification Number :

Packing Group :

In Accordance with IMDG

Proper Shipping Name : Not regulated

Hazard Class :

Identification Number :

Packing Group :

In Accordance with IATA

Proper Shipping Name : Not regulated

Hazard Class :

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Identification Number :
Packing Group :
Marine Pollutant :
In Accordance with TDG
Proper Shipping Name : Not regulated
Hazard Class :
Identification Number :
Packing Group :
Marine Pollutant :

SECTION 15: REGULATORY INFORMATION

US federal regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) SARA 313 (TRI reporting)

US State Regulations

- **Massachusetts Substance List:** Not regulated.
- **New Jersey Worker and Community Right to Know Act:** Not listed.
- **Pennsylvania Worker and Community Right to Know Act:** Not listed.
- **Rhode Island RTK:** Not regulated.
- **California Proposition 65:** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non Domestic Substances (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemicals	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances	Yes
Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes
United States	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country.

A "No" indicates that one or more components of the product are not listed or exempted from listing on the inventory administered by the governing country.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 08/18/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

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Party Responsible for the Preparation of This Document

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This information is based on our knowledge as of the Revision Date and is intended to describe the product only for the purposes of health, safety, and environmental requirements as of the Revision Date. It should not therefore be construed as guaranteeing any specific property of the product nor as providing any warranty, expressed or implied. The user assumes all responsibility, liability, risk of loss, damage, or expense arising out of, or in any way connected with, the handling, storage, use, or disposal of the product.

North America GHS US 2015 & WHMIS