



SAFETY DATA SHEET

1. Identification

Product identifier	KE-3493
Other means of identification	
Sales Code	5562MC
Recommended use	RTV rubbers Thermally conductive RTV rubber (gluing and sealing)
Recommended restrictions	Industrial use only.
Manufacturer/Importer/Supplier/Distributor information	
Name	Shin-Etsu Silicones of America, Inc.
Address	1150 Damar Drive, Akron, OH 44305 USA
Contact	Regulation compliance group
Telephone Number	+1-330-630-9860
Fax Number	+1-330-630-9855
Emergency Phone Number	Chemtrec: +1-800-424-9300 (Within US) Chemtrec: +1-703-527-3887 (Outside US)

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	

*Hazards not stated here are "Not classified", "Not applicable" or "Classification not possible".

Label elements



Signal word	Warning
Hazard statement	Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Avoid release to the environment.
Response	IF ON SKIN: Wash with plenty of soap and water. If skin irritation 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. If eye irritation persists: Get medical advice/attention. Collect spillage. Take off contaminated clothing and wash it before reuse.
Storage	Not available.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.
Substance(s) formed under the condition of use	This product reacts with water, moisture or humid air to evolve following compounds: Acetone
HMIS® ratings	Health: 2 Flammability: 1 Physical hazard: 0

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Alkenoxysilane*		Proprietary*	5 - < 10
Alkoxysilane*		Proprietary*	< 1
Organosilane*		Proprietary*	< 1

Decomposition

Chemical name	CAS number	%
Acetone	67-64-1	

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. For minor skin contact, avoid spreading material on unaffected skin. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Eye contact	Rinse immediately 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.
Ingestion	Rinse mouth. Get medical attention immediately.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	By heating and fire, harmful vapors/gases may be formed. Nitrogen oxides. (corrosive)
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet, gloves, rubber boots, and self-contained breathing apparatus.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	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.
Methods and materials for containment and cleaning up	Eliminate sources of ignition. Large Spills: 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 the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Avoid release to the environment.



7. Handling and storage

Precautions for safe handling	Provide adequate ventilation. Use care in handling/storage. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains. Do not breathe mist or vapor. Do not get this material in contact with eyes. Avoid contact with skin. Avoid prolonged exposure.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Keep out of the reach of children. Store in a cool, dry place out of direct sunlight. Keep in original container.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Decomposition	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m ³ 1000 ppm

US. ACGIH Threshold Limit Values

Decomposition	Type	Value
Acetone (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Decomposition	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m ³
		250 ppm

Biological limit values

ACGIH Biological Exposure Indices

Decomposition	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls

Explosion-proof 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.

Individual protection measures, such as personal protective equipment

Eye/face protection Tightly sealed safety glasses according to EN 166.

Skin protection

Hand protection Wear protective gloves.

Other Wear suitable protective clothing.

Respiratory protection If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Do not get in eyes. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Form Paste.

Color White.

Odor Acetone odor

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not applicable

Initial boiling point and boiling range Not applicable

Flash point 59 °F (15 °C) Closed Cup (Does not sustain combustion)

Evaporation rate < 1 (Butyl Acetate=1)

Material name: KE-3493

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Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 2.1 % v/v [Acetone]
Flammability limit - upper (%) 13.0 % v/v [Acetone]
Explosive limit - lower (%) Not available.
Explosive limit - upper (%) Not available.

Vapor pressure Negligible (25 °C)

Vapor density > 1 (air=1)

Relative density 1.47 (23 degrees C)

Solubility(ies)

Solubility (water) Not soluble

Partition coefficient (n-octanol/water) Not applicable

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not applicable

Other information

Molecular weight Not applicable

10. Stability and reactivity

Reactivity No hazardous reaction known under normal conditions of use, storage and transport.

Chemical stability Stable at normal conditions.

Possibility of hazardous reactions Hazardous polymerization does not occur.

Conditions to avoid None known.

Incompatible materials Strong oxidizing agents. Water, moisture.

Hazardous decomposition products This product reacts with water, moisture or humid air to evolve following compounds: Acetone.
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.

11. Toxicological information

Information on likely routes of exposure

Ingestion Expected to be a low ingestion hazard.
Inhalation No adverse effects due to inhalation are expected.
Skin contact Causes skin irritation.
Eye contact Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Alkenoxysilane (CAS Proprietary)		
Acute		
<i>Inhalation</i>		
LC50	Rat	> 5.83 mg/l
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg



Components	Species	Test Results
Subacute		
<i>Inhalation</i>		
Alkoxysilane (CAS Proprietary)	Rat	0.31 mg/l, 28 days
Acute		
<i>Dermal</i>		
LD50	Rabbit	4290 mg/kg
<i>Oral</i>		
LD50	Rat	1570 - 3650 mg/kg
		1780 mg/kg
Organosilane (CAS Proprietary)		
Acute		
<i>Oral</i>		
LD50	Rat	3.67 ml/kg
Decomposition	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
<i>Inhalation</i>		
LC50	Rat	50.1 mg/l, 8 Hours
<i>Oral</i>		
LD50	Mouse	3000 mg/kg
	Rabbit	5340 mg/kg
	Rat	5800 mg/kg
Skin corrosion/irritation	SKIN-RABBIT : 5mg/24Hr SEVERE [Alkoxysilane] Causes visible necrosis of the skin tissue (Rabbit/60 Minutes) [Organosilane] SKIN-RABBIT : MILD(P.I.=0.2) [Alkenoxysilane]	
Serious eye damage/eye irritation	EYE-RABBIT : 0.75mg/24Hr SEVERE [Alkoxysilane] Causes serious eye damage. [Organosilane] EYE-RABBIT : Minimal irritant [Alkenoxysilane] Causes serious eye irritation. [Acetone] [Acetone]	
Respiratory or skin sensitization		
Respiratory sensitization	Not available.	
Skin sensitization	May cause an allergic skin reaction. [Alkoxysilane] No skin sensitizing(guinea pigs) [Alkenoxysilane]	
Germ cell mutagenicity	Negative(Bacteria), Negative(Chromosome analysis) [Alkenoxysilane] Negative(Ames Test) [Alkoxysilane]	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not listed.		
Reproductive toxicity	Not available.	
Specific target organ toxicity - single exposure	May cause damage to the following organs. Narcotic effects. [Acetone]	
Specific target organ toxicity - repeated exposure	Not available.	
Aspiration hazard	Not available.	
Further information	This product reacts with water , moisture or humid air to evolve following compounds: Acetone	

12. Ecological information

Ecotoxicity	Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. [Alkenoxysilane]
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Components	Species	Test Results	
Alkenoxysilane (CAS Proprietary)			
Aquatic			
Crustacea	LC50	Daphnia	12.7 mg/l, 48 hr
Fish	LC50	Carp	18 mg/l, 96 hr
Alkoxysilane (CAS Proprietary)			
Aquatic			
Fish	LC50	Oryzias latipes	> 1000 mg/l, 48 hr
Decomposition	Species	Test Results	
Acetone (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	21.6 - 23.9 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Persistence and degradability	Causes easily hydrolysis in water or atmosphere. [Alkoxysilane]		
Bioaccumulative potential	Not available.		
Mobility in soil	Not available.		
Other adverse effects	Not available.		

13. Disposal considerations

Disposal instructions Follow applicable Federal, State and Local regulations.

14. Transport information

DOT

UN number UN3077
UN proper shipping name Environmentally hazardous substances, solid, n.o.s. (Alkenoxysilane)
Transport hazard class(es)
Class 9
Subsidiary risk -
Label(s) 9
Packing group III
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions 8, 146, B54, IB8, IP3, N20, T1, TP33
Packaging exceptions 155
Packaging non bulk 213
Packaging bulk 240
REGULATED IN TRANSPORT for packages of greater than 119 gallons or 450 liters volume, or when shipped by water.

IATA

UN number UN3077
UN proper shipping name Environmentally hazardous substance, solid, n.o.s. (Alkenoxysilane)
Transport hazard class(es)
Class 9
Subsidiary risk -
Packing group III
Environmental hazards No.
ERG Code 9L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Other information
Passenger and cargo aircraft Allowed.
Cargo aircraft only Allowed.

IMDG

UN number UN3077
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Alkenoxysilane)
Transport hazard class(es)
Class 9
Subsidiary risk -
Packing group III



Environmental hazards Yes
Marine pollutant F-A, S-F
EmS Read safety instructions, SDS and emergency procedures before handling.
Special precautions for user This product is not intended to be transported in bulk.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
DOT; IATA; IMDG



Marine pollutant



General information

IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant. Sealed packets and articles containing less than 10 ml of an environmentally hazardous liquid, or containing less than 10 g of an environmentally hazardous solid are not regulated as dangerous goods.

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

US. Massachusetts RTK - Substance List

Not regulated.

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

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. 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.

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International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
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	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	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(s)

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

16. Other information, including date of preparation or last revision

Issue date	05-13-2015
Version #	01
NFPA ratings	Health: 2 Flammability: 1 Instability: 0

NFPA ratings



Disclaimer

This information is offered in good faith as typical values and not as a product specification. No warranty, expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

This product has been designed, manufactured and developed solely for general industrial use only. This product is not designed for, intended for use as, or suitable for, medical, surgical or other particular purposes. Users have the sole responsibility and obligation to determine the suitability of this product for any application, to make preliminary tests, and to confirm the safety of this product for their use. Users must never use this product for the purpose of implantation into the human body and/or injection into humans.

Revision Information

Product and Company Identification
Composition / Information on Ingredients: Additional Components
Physical & Chemical Properties: Multiple Properties
Toxicological Information: Toxicological Data
Transport Information: Proper Shipping Name/Packing Group
Regulatory Information: Regulatory Information
HazReg Data: Pacific Rim
GHS: Classification

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