SAFETY DATA SHEET

1. Identification

Product identifier **KE-45-T**

Other means of identification

Sales Code 0980S0

Recommended use RTV rubbers
RTV rubber for electrical, electronic and general industry (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 1
Sensitization, skin	Category 1B
Carcinogenicity	Category 1B
Specific target organ toxicity, repeated exposure	Category 2 (hematopoietic system)

Environmental hazards Not classified.

OSHA defined hazards Not classified.

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

Label elements

Signal word Danger

Hazard statement Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. May cause damage to organs (hematopoietic system) through prolonged or repeated exposure.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust /fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response IF ON SKIN: Wash with plenty of soap and 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. Immediately call a POISON CENTER or doctor/physician. If exposed or concerned: Get medical advice/attention. Get medical advice / attention if you feel unwell. Take off contaminated clothing and wash it before reuse.

Storage Store locked up.

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: Methylethylketoxime
HMIS® ratings	Health: 3* Flammability: 1 Physical hazard: 0

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Methyloximesilane		22984-54-9	3 - 10
Vinyloximesilane		2224-33-1	1 - 3
Alkoxysilane		919-30-2	1 - 3
Methylethylketoxime(Impurity)		96-29-7	0.1 - 1

Decomposition

Chemical name	Common name and synonyms	CAS number	%
Methylethylketoxime		96-29-7	

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 or rash 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 immediately.
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. Permanent eye damage including blindness could result. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	IF exposed or concerned: Get medical advice/attention. 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.

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.

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.

7. Handling and storage

Precautions for safe handling

Provide adequate ventilation. Use care in handling/storage. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. 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

Store locked up. Keep container tightly closed. Keep out of the reach of children. Store in a cool, dry place out of direct sunlight.
Store away from incompatible materials (see Section 10 of the SDS).
Keep in original container.

8. Exposure controls/personal protection

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides

Decomposition	Type	Value
Methylethylketoxime (CAS 96-29-7)	TWA	36 mg/m3
		10 ppm

Vendor guide

Decomposition	Type	Value
Methylethylketoxime (CAS 96-29-7)	STEL	10 ppm
	TWA	3 ppm

Biological limit values

No biological exposure limits noted 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.

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

Physical state

Solid.

Form

Paste.

Color

Milk-white Translucent.

Odor

Oxime odor

Odor threshold

Not available.

pH	Not measurable (Refer to water solubility)
Melting point/freezing point	No data
Initial boiling point and boiling range	Not applicable
Flash point	152.6 °F (67 °C) Closed Cup (Does not sustain combustion)
Evaporation rate	< 1 (Butyl Acetate=1)
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	No data
Explosive limit - upper (%)	No data
Vapor pressure	Negligible (25 °C)
Vapor density	> 1 (air=1)
Relative density	1.05 (25 °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

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: Methylethylketoxime. 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

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Ingestion	Expected to be a low ingestion hazard.
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. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Alkoxysilane (CAS 919-30-2)		
Acute		
Dermal		
LD50	Rabbit	4290 mg/kg
Oral		
LD50	Rat	1570 - 3650 mg/kg

Components	Species	Test Results
		1780 mg/kg

Decomposition	Species	Test Results
Methylethylketoxime (CAS 96-29-7)		
Acute		
Dermal		
LD50	Rabbit	> 1000 mg/kg (Male and female)
Inhalation		
Vapor		
LC50	Rat	> 4.83 mg/l, 4 hours (Male and female)
Oral		
LD50	Rat	> 900 mg/kg (Male and female)
		2326 mg/kg (Male)

Skin corrosion/irritation
SKIN-RABBIT : 5mg/24Hr SEVERE [Alkoxysilane]
Causes skin irritation. [Methylethylketoxime]

Serious eye damage/eye irritation
Causes serious eye damage. [Vinyloximesilane] [Methylethylketoxime]
Causes serious eye irritation. [Methyloximesilane]
EYE-RABBIT : 0.75mg/24Hr SEVERE [Alkoxysilane]

Respiratory or skin sensitization

Respiratory sensitization
Not available.

Skin sensitization
May cause an allergic skin reaction. [Methyloximesilane] [Vinyloximesilane] [Alkoxysilane] [Methylethylketoxime]

Germ cell mutagenicity
Negative(Ames Test) [Alkoxysilane]

Carcinogenicity
May cause cancer. [Methylethylketoxime]

IARC Monographs. Overall Evaluation of Carcinogenicity
Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens
Not listed.

Reproductive toxicity
Not available.

Specific target organ toxicity - single exposure
May cause damage to the following organs.
Upper respiratory tract. Narcotic effects. [Methylethylketoxime]

Specific target organ toxicity - repeated exposure
May cause damage to the following organs through prolonged or repeated exposure:
Hematopoietic system. [Methyloximesilane]
Hematopoietic system. [Vinyloximesilane]
Blood. Hematopoietic system. [Methylethylketoxime]

Aspiration hazard
Not applicable.

Chronic effects
Not available.

Further information

Additional Information
Methyl Ethyl Ketoxime (MEKO). Material will generate MEKO on 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 the skin.
Eyes Irritation ;Causes severe irritation.
Acute Oral Tox. ;LD50(rat)= >900mg/kg.
Acute Dermal Tox. ;LD50(rabbit)= >1000mg/kg.
Acute Inhalation Tox.;LC50(rat) > 4.83mg/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.
Carcinogenicity ;Liver carcinomas were observed in a lifetime inhalation study (ca.2 years) in which mice and rats were exposed.
Mutagenicity ;Not considered mutagenic based on several in vitro and vivo studies.
Other Chronic Study ;Degenerative effects on the olfactory epithelium of nasal passages occured in a concentration related manner in males and females of mice and rats at MEKO concentration of 15, 75 and 375ppm. The significant change in hematological parameters were observed at 404ppm concentration.
Workplace Environmental Exposure Level; Vendor guide ; 3ppm(TWA), 10ppm(STEL), AIHA WEEL ; 10ppm(TWA)

12. Ecological information

Ecotoxicity

Components		Species	Test Results
Alkoxysilane (CAS 919-30-2)			
Aquatic			
Fish	LC50	Oryzias latipes	> 1000 mg/l, 48 hr
Decomposition		**Species**	**Test Results**
Methylethylketoxime (CAS 96-29-7)			
Aquatic			
Acute			
Fish	LC50	Fathead minnow (Pimephales promelas)	>= 777 - <= 914 mg/l, 96 hours

Persistence and degradability Causes easily hydrolysis in water or atmosphere. [Alkoxysilane]

Bioaccumulative potential No data available.

Mobility in soil Not available.

Mobility in general No data available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Follow applicable Federal, State and Local regulations.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This product is not intended to be transported in bulk.

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.

Toxic Substances Control Act (TSCA) All components of the mixture on the TSCA 8(b) inventory are designated "active".

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

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. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
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)	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	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
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 03-23-2015

Revision date 05-23-2023

Version # 03

HMIS® ratings	Health: 3* Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 3 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	This document has undergone significant changes and should be reviewed in its entirety.