

1. Identification

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| Product identifier | KE-45-B |
| Other means of identification | |
| Sales Code | 0995S0 |
| 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 | Serious eye damage/eye irritation | Category 1 |
| | Sensitization, skin | 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



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| Signal word | Danger |
| Hazard statement | Causes serious eye damage. May cause an allergic skin reaction. May cause damage to organs (hematopoietic system) through prolonged or repeated exposure. |
| Precautionary statement | |
| Prevention | Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. 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. 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: Methylethylketoxime The following material is embedded in the product and not available as respirable dusts. When used as intended or as supplied, the product will not pose hazards. Carbon black. |

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|-------------------------------|--------------------------|--------------|---------|
| Methyloximesilane* | | Proprietary* | 3 - < 5 |
| Vinyloximesilane* | | Proprietary* | 1 - < 3 |
| Alkoxysilane* | | Proprietary* | < 1 |
| Carbon black | | 1333-86-4 | 0.1711 |
| Methylethylketoxime(Impurity) | | 96-29-7 | < 1 |

Decomposition

| Chemical name | CAS number | % |
|---------------------|------------|---|
| Methylethylketoxime | 96-29-7 | |

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

4. First-aid measures

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| 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 | Coughing. Dermatitis. Rash. Upper respiratory tract irritation. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause an allergic skin reaction. |
| 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

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| Suitable extinguishing media | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). |
| 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. |
| General fire hazards | No unusual fire or explosion hazards noted. |

6. Accidental release measures

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| 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. Wash hands thoroughly after handling. Do not breathe the 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)**

| Components | Type | Value |
|------------------------------|------|-----------------------|
| Carbon black (CAS 1333-86-4) | PEL | 3.5 mg/m ³ |

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|------------------------------|------|---------------------|---------------------|
| Carbon black (CAS 1333-86-4) | TWA | 3 mg/m ³ | Inhalable fraction. |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|------------------------------|------|-----------------------|
| Carbon black (CAS 1333-86-4) | TWA | 0.1 mg/m ³ |

US. Workplace Environmental Exposure Level (WEEL) Guides

| Decomposition | Type | Value |
|-----------------------------------|------|--------------------------------|
| Methylethylketoxime (CAS 96-29-7) | TWA | 36 mg/m ³ 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).

Exposure guidelines

Occupational Exposure Limits are not relevant to the current physical form of the product.

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

| | |
|---|---|
| Form | Paste. |
| Color | Black. |
| Odor | Oxime odor |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point | Not applicable |
| Initial boiling point and boiling range | Not applicable |
| Flash point | 163.4 °F (73 °C) Closed Cup (Does not sustain combustion) |
| Evaporation rate | < 1 (Butyl Acetate=1) |
| Flammability (solid, gas) | Not applicable. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | No data |
| Flammability limit - upper (%) | No data |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| 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 |
| Other information | |
| Molecular weight | Not applicable |

10. Stability and reactivity

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|---|--|
| 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: Methyleneketoxime. 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. |

11. Toxicological information

Information on likely routes of exposure

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|------------------|--|
| Ingestion | Expected to be a low ingestion hazard. |
|------------------|--|

Inhalation No adverse effects due to inhalation are expected.

Skin contact May cause an allergic skin reaction.

Eye contact Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics Coughing. Dermatitis. Rash. Upper respiratory tract irritation. 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. May cause an allergic skin reaction.

Information on toxicological effects

Acute toxicity

| Components | Species | Test Results |
|--------------------------------|---------|---------------------------------|
| Alkoxysilane (CAS Proprietary) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | 4290 mg/kg |
| <i>Oral</i> | | |
| LD50 | Rat | 1570 - 3650 mg/kg 1780 mg/kg |

Carbon black (CAS 1333-86-4)

Acute

Oral

LD50 Rat > 8000 mg/kg

| Decomposition | Species | Test Results |
|---------------|---------|--------------|
|---------------|---------|--------------|

Methylethylketoxime (CAS 96-29-7)

Acute

Dermal

LD50 Rabbit > 1000 mg/kg (Male and female)

Inhalation

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]

Serious eye damage/eye irritation Causes serious eye damage. [Vinylloximesilane] [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] [Vinylloximesilane]
[Alkoxysilane] [Methylethylketoxime]

Germ cell mutagenicity Negative(Ames Test) [Alkoxysilane]

Carcinogenicity Suspected of causing cancer. [Methylethylketoxime]
The following material is embedded in the product and not available as respirable dusts. When used as intended or as supplied, the product will not pose hazards.
Carbon black.

IARC Monographs. Overall Evaluation of Carcinogenicity

Carbon black (CAS 1333-86-4) 2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

| | |
|---|--|
| Specific target organ toxicity - repeated exposure | May cause damage to the following organs through prolonged or repeated exposure: Hematopoietic system. [Methyloximesilane] Hematopoietic system. [Vinyloximesilane] |
| Aspiration hazard | Not available. |
| Chronic effects | Not available. |
| Further information | <p>Additional Information</p> <p>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</p> <p>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. 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 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)</p> |

12. Ecological information

Ecotoxicity

| Components | Species | Test Results |
|-----------------------------------|---------|---|
| Alkoxysilane (CAS Proprietary) | | |
| Aquatic | | |
| Fish | LC50 | Oryzias latipes > 1000 mg/l, 48 hr |
| Decomposition | | |
| Methylethylketoxime (CAS 96-29-7) | | |
| Aquatic | | |
| 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 | 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

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. Not applicable.

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

Carbon black (CAS 1333-86-4)

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

Carbon black (CAS 1333-86-4)

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

Carbon black (CAS 1333-86-4)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

The following material is embedded in the product and not available as respirable dusts. When used as intended or as supplied, the product will not pose hazards.

Carbon black.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Carbon black (CAS 1333-86-4)

Listed: February 21, 2003

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | 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) | 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 04-10-2015
Version # 01
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

Product and Company Identification: Product and Company Identification
Composition / Information on Ingredients: Additional Components
Physical & Chemical Properties: Multiple Properties
Regulatory Information: Regulatory Information
HazReg Data: Pacific Rim
GHS: Classification