

1. Identification

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|---|--|
| Product identifier | KE-347-B |
| Other means of identification | |
| Sales Code | 2041S0 |
| Recommended use | RTV rubbers RTV rubber for electrical, electronic and general industry (gluing and sealing) , RTV rubber for electrical, electronic and general industry (coating) |
| 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 | Flammable liquids | Category 3 |
| Health hazards | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 2A |
| 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 Warning

Hazard statement Flammable liquid and vapor. Causes skin irritation. Causes serious eye irritation.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling.

Response In case of fire: Use water fog, foam, dry chemical powder or carbon dioxide(CO2) to extinguish. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin 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. Take off contaminated clothing and wash it before reuse.

Storage Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

| | |
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| Substance(s) formed under the condition of use | This product reacts with water , moisture or humid air to evolve following compounds: Acetone 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 of the following material. Carbon black. |
| HMIS® ratings | Health: 2 Flammability: 3 Physical hazard: 0 |

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|----------------|--------------------------|------------|-----------|
| Alkenoxysilane | | 15332-99-7 | 3 - 10 |
| Alkoxysilane | | 919-30-2 | 0.3 - 1 |
| Organosilane | | 69709-01-9 | 0.3 - 1 |
| Carbon black | | 1333-86-4 | 0.1 - 0.3 |

Decomposition

| Chemical name | Common name and synonyms | 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

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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 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

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| 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

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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. Ventilate closed spaces before entering them. Wear appropriate personal protective equipment. |
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Methods and materials for containment and cleaning up

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material.

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. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Provide adequate ventilation.
Use care in handling/storage. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. Take precautionary measures against static discharges. Wear appropriate personal protective equipment. Wash hands thoroughly after handling.
Do not breathe mist or vapor. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store in cool place. Store in a well-ventilated place. 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. 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 |
| Decomposition | Type | Value |
| Acetone (CAS 67-64-1) | PEL | 2400 mg/m ³ 1000 ppm |

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|------------------------------|-------------|---------------------|---------------------|
| Carbon black (CAS 1333-86-4) | TWA | 3 mg/m ³ | Inhalable fraction. |
| Decomposition | Type | Value | |
| Acetone (CAS 67-64-1) | STEL | 500 ppm | |
| | TWA | 250 ppm | |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|------------------------------|-------------|----------------------------------|
| Carbon black (CAS 1333-86-4) | TWA | 0.1 mg/m ³ |
| 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) | 25 mg/l | Acetone | Urine | * |

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

Exposure guidelines**US - California OELs: Skin designation**

Toluene (CAS 108-88-3)

Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Toluene (CAS 108-88-3)

Skin designation applies.

| | |
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| 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 | Avoid contact with skin. Avoid contact with eyes. 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

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|---|--|
| Appearance | |
| Form | Paste. |
| Color | Black. |
| Odor | Acetone 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 | 77 °F (25 °C) Closed Cup |
| Evaporation rate | < 1 (Butyl Acetate=1) |
| 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 | 1.05 (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 | 55 Pa·s (25 °C) |
| 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. |

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| 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

| | |
|---------------------|--------------------------------------|
| Inhalation | No significant effects are expected. |
| Skin contact | Causes skin irritation. |
| Eye contact | Causes serious eye irritation. |
| Ingestion | No significant effects are expected. |

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

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 1780 mg/kg |
| Carbon black (CAS 1333-86-4) | | |
| Acute | | |
| Oral | | |
| LD50 | Rat | > 8000 mg/kg |
| Organosilane (CAS 69709-01-9) | | |
| Acute | | |
| Oral | | |
| LD50 | Rat | 3.67 ml/kg |

| Decomposition | Species | Test Results |
|-----------------------|---------|--------------------|
| Acetone (CAS 67-64-1) | | |
| Acute | | |
| Inhalation | | |
| LC50 | Rat | 50.1 mg/l, 8 Hours |
| Oral | | |
| 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]

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

Respiratory or skin sensitization

| | |
|----------------------------------|----------------|
| Respiratory sensitization | Not available. |
|----------------------------------|----------------|

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|---|--|
| Skin sensitization | Positive (Guinea pig) [Alkoxysilane] |
| Germ cell mutagenicity | Negative(Ames Test) [Alkoxysilane] |
| Germ cell mutagenicity: Ames test | |
| Organosilane | OECD 471 Result: Negative with and without metabolic activation. Species: Micro-organisms |
| Carcinogenicity | 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 of the following material. Carbon black. |
| IARC Monographs. Overall Evaluation of Carcinogenicity | |
| Carbon black (CAS 1333-86-4) | 2B Possibly carcinogenic to humans. |
| Toluene (CAS 108-88-3) | 3 Not classifiable as to carcinogenicity to humans. |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) | |
| Not regulated. | |
| 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. Narcotic effects. [Acetone] |
| Specific target organ toxicity - repeated exposure | Not available. |
| Aspiration hazard | Not available. |
| Chronic effects | Not available. |
| Further information | This product reacts with water , moisture or humid air to evolve following compounds: Acetone |

12. Ecological information

Ecotoxicity

| Product | Species | Test Results |
|-------------------------------|----------------|--------------------------------------|
| KE-347-B | | |
| Aquatic | | |
| <i>Acute</i> | | |
| Crustacea | EC50 | Daphnia |
| | | 16827.5863 mg/l, 48 hours estimated |
| Components | Species | Test Results |
| Alkoxysilane (CAS 919-30-2) | | |
| Aquatic | | |
| Fish | LC50 | Oryzias latipes |
| | | > 1000 mg/l, 48 hr |
| Organosilane (CAS 69709-01-9) | | |
| Aquatic | | |
| <i>Acute</i> | | |
| Algae | EC50 | Pseudokirchneriella subcapitata |
| | | > 133 mg/l, 72 hours |
| | NOEC | Pseudokirchneriella subcapitata |
| | | > 133 mg/l, 72 hours |
| Crustacea | EC50 | Daphnia |
| | | > 122 mg/l, 48 hours |
| Decomposition | Species | Test Results |
| Acetone (CAS 67-64-1) | | |
| Aquatic | | |
| Crustacea | EC50 | Water flea (Daphnia magna) |
| | | 10294 - 17704 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]

Biodegradability

Percent degradation (Aerobic biodegradation-ready)

Organosilane 36 % OECD 301F, Not readily biodegradable.
Species: Activated sludge
Test Duration: 28 days

| | |
|----------------------------------|--------------------|
| 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

| | |
|-------------------------------------|---|
| UN number | UN1993 |
| UN proper shipping name | Flammable liquids, n.o.s. (Alkenoxysilane) |
| Transport hazard class(es) | |
| Class | 3 |
| Subsidiary risk | - |
| Label(s) | 3 |
| Packing group | III |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions | B1, B52, IB3, T4, TP1, TP29 |
| Packaging exceptions | 150 |
| Packaging non bulk | 203 |
| Packaging bulk | 242 |

IATA

| | |
|-------------------------------------|---|
| UN number | UN1993 |
| UN proper shipping name | Flammable liquid, n.o.s. (Alkenoxysilane) |
| Transport hazard class(es) | |
| Class | 3 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | No. |
| ERG Code | 3L |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Other information | |
| Passenger and cargo aircraft | Allowed with restrictions. |
| Cargo aircraft only | Allowed with restrictions. |

IMDG

| | |
|---|---|
| UN number | UN1993 |
| UN proper shipping name | FLAMMABLE LIQUID, N.O.S. (Alkenoxysilane) |
| Transport hazard class(es) | |
| Class | 3 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | |
| Marine pollutant | No. |
| EmS | F-E, S-E |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| 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. |

DOT



IATA; IMDG



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.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Toluene (CAS 108-88-3) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 313 (TRI reporting)

US state regulations 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 of the following material.
Carbon black.

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

Carbon black (CAS 1333-86-4) Listed: February 21, 2003

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Toluene (CAS 108-88-3) Listed: January 1, 1991

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Carbon black (CAS 1333-86-4)

Toluene (CAS 108-88-3)

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) | Yes |
| 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 |

| Country(s) or region | Inventory name | On inventory (yes/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 | 04-22-2015 |
| Revision date | 04-09-2019 |
| Version # | 03 |
| HMIS® ratings | Health: 2 Flammability: 3 Physical hazard: 0 |
| NFPA ratings | Health: 2 Flammability: 3 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.