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**MATERIAL SAFETY DATA SHEET**

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**SECTION 1. COMPANY IDENTIFICATION**

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## COMPANY IDENTIFICATION

MANUFACTURER'S NAME: Shin-Etsu Chemical Co., Ltd.

ADDRESS: 6-1, 2-Chome, Ohtemachi, Chiyodaku, Tokyo, JAPAN

EMERGENCY TELEPHONE NUMBER:

+31(0)36-5326380 (Shin-Etsu Silicones Europe B.V., THE NETHERLANDS)

TELEPHONE NUMBER FOR INFORMATION:

+81(0)3-3246-5121 (Tokyo, JAPAN)

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PRODUCT NAME :

**KE-3421**

PRODUCT CLASSIFICATION:

One Component Silicone Rubber Compound

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**SECTION 2. COMPOSITION**

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SINGLE OR MIXTURE:

Mixture

CHEMICAL IDENTIFICATION:

Organopolysiloxane mixture

HAZARDOUS COMPONENT(S):

CAS No.	EINECS / ELINCS No.	COMPONENT(S)	Wt %	CLASSIFICATION
Confidential	Confidential	Alkenoxysilane	ca.10	F:R11

(See Section 8 of this MSDS for Exposure Guideline)

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**SECTION 3. HAZARDS IDENTIFICATION**

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PRINCIPAL HAZARD:

Highly flammable

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**SECTION 4. FIRST AID MEASURES**

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INHALATION ; Remove to fresh air.

SKIN contact ; Immediately remove product from skin with dry

cloth or towel, and wash exposed area with detergent.

EYES contact ; Immediately flush with plenty of water for at least 15 minutes and promptly call a physician.

INGESTION ; Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Call a physician immediately.

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**SECTION 5. FIRE FIGHTING MEASURES**

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## EXTINGUISHING MEDIA:

Foam, dry chemical, carbon dioxide or fine water spray

## SPECIAL FIRE FIGHTING PROCEDURE:

None

## UNUSUAL FIRE AND EXPLOSION HAZARD:

None

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

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## STEP TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Shut off all ignition sources.

Contain the spill or leak.

Scrape up with rag or other material and place in container.

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**SECTION 7. HANDLING AND STORAGE**

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## PRECAUTION TO BE TAKEN IN HANDLING AND STORING:

Keep container closed when not in use.

Store in a cool place.

Keep away from heat, sparks and flame.

Do not lay the container on its side.

Use only with adequate ventilation.

Avoid prolonged breathing vapor.

Avoid contact with eyes and skin.

Contact lens wearers take appropriate precaution.

Keep out of reach of children.

\* \* \* \* \* Information about the emptied container \* \* \* \* \*

Do not re-use this container.

This container will be hazardous when emptied.

Residues will be explosive or flammable.

Keep away from heat, sparks and flame.

Do not puncture or cut this container, and do not weld on or near this container.

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**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**EXPOSURE GUIDELINES:**

ACGIH TLV-TWA : Not established,  
OSHA PEL : Not established  
[Alkenoxysilane]  
ACGIH TLV-TWA : 500ppm ; STEL 750ppm,  
OSHA PEL : 8H TWA 1000ppm [Acetone ; decomposed product]

**RESPIRATORY PROTECTION(specify type):**

Use air-supplied breathing apparatus unless local exhaust ventilation is adequate or decomposed product is within TLV and PEL guideline.

**VENTILATION:**

LOCAL EXHAUST: Required  
MECHANICAL(general): Adequate ventilation system  
SPECIAL: Unknown  
OTHER: Pay attention to ventilation such as local exhaust, mechanical and/or door open for at least 24 hours after application.

**PROTECTIVE GLOVES:**

Plastic film or rubber gloves

**EYE PROTECTION:**

Safety glasses

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:**

Eyewash equipment

**WORK/HYGIENIC PRACTICES:**

Keep away from heat, sparks and flame.  
Avoid prolonged breathing vapor.  
Avoid contact with eyes and skin.  
Wash hands after handling.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

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**BOILING POINT:**

Not applicable

**FLASH POINT(method used):**

1 degrees C (Closed cup)

**FLAMMABLE LIMITS:**

[Acetone ; decomposed product] LOWER: 2.1% UPPER: 13%

**VAPOR PRESSURE:**

<1mmHg (25 degrees C) [Alkenoxysilane]

**VAPOR DENSITY(air=1):**

>1

**SPECIFIC GRAVITY:**

0.98 (25 degrees C)

**Viscosity:**

300 mm<sup>2</sup>/s(25 degrees C)

**MELTING POINT:**

Not applicable

**EVAPORATION RATE:**

<1 (Butyl Acetate=1) [Alkenoxysilane]

**Partition coefficient (Log n-Octanol/Water):**

Not applicable

**SOLUBILITY IN WATER:**

Not soluble

**APPEARANCE(color):**

Light yellow

**APPEARANCE(form):**

Paste

**ODOR:**

Acetone odor

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**SECTION 10. STABILITY AND REACTIVITY**

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**STABILITY:**

Stable

**CONDITION TO AVOID:**

Exposure to air or moisture until ready to use - Causes curing and acetone vapors form gradually.

**INCOMPATIBILITY(material to avoid):**

Water or moisture

**HAZARDOUS DECOMPOSITION OR BY-PRODUCT:**

Water, moisture, or humid air can cause 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. Formaldehyde.

**HAZARDOUS POLYMERIZATION:**

Will not occur

**CONDITION TO AVOID:**

None

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**SECTION 11. TOXICOLOGICAL INFORMATION**

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**SKIN IRRITATION:**

No information is available.

**EYE IRRITATION:**

No information is available.

**ACUTE TOXICITY(LD50):**

LD50(Oral/Rat) : >20ml/kg [Alkenoxysilane]

LD50(Oral/Rat) : 5.8g/kg [Acetone ; decomposed product]

**ACUTE TOXICITY(LC50):**

LC50(Inhalation/Rat) : 50.1g/m<sup>3</sup>/8Hr

[Acetone ; decomposed product]

## CHRONIC TOXICITY:

No information is available.

## CARCINOGENICITY:

NTP:Not listed, IARC:Not listed, OSHA REGULATED:Not listed

## OTHER INFORMATION:

None

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**SECTION 12. ECOLOGICAL INFORMATION**

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## BIODEGRADATION:

Not applicable

## BIOACCUMULATION:

No information is available.

## AQUATIC TOXICITY:

TLm(Oryzias latipes) : &gt;1000ppm [Alkenoxysilane]

## OTHER INFORMATION:

No ozone depleating materials(CFCs,HALONS and HCFCs) are present and used in manufacturing.

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**SECTION 13. DISPOSAL CONSIDERATIONS**

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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, and local laws.

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**SECTION 14. TRANSPORT INFORMATION**

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## &lt;IMO INFORMATION&gt;

## ID No.:

UN 1133

## CLASSIFICATION AND CLASS:

Flammable Liquids / Class 3.2

## PACKAGING GROUP:

II

## PROPER SHIPPING NAME:

Adhesive

## TECHNICAL SHIPPING NAME:

Contains Organosilane

## MARINE POLLUTANT:

None

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## &lt;DOT INFORMATION&gt;

## ID No. (49CFR 172.101):

UN 1133

## HAZARD CLASS(49CFR 172.101):

3, Flammable Liquid



PACKING GROUP(49CFR 172.101):

II

PROPER SHIPPING NAME(49CFR 172.101):

Adhesives, containing a flammable liquid

TECHNICAL SHIPPING NAME:

Contains Organosilane

DOT REPORTABLE QUANTITY(49CFR 172.101, APP.) :

HAZARD SUBSTANCE(S) NAME / (CAS No.), CONTENTS AND RQ

Not applicable

SECTION 15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT(TSCA) STATUS:

Listed on the TSCA Inventory.

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EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES

(EINECS) STATUS:

Listed on the EINECS.

LABELING ACCORDING TO EC-REGULATIONS REQUIRED:

SYMBOL : F

R-PHRASE : (R-11) Highly flammable

S-PHRASE : (S-7) Keep container tightly closed.

(S-25) Avoid contact with eyes.

(S-51) Use only in well-ventilated areas.

CONTAINS : Alkenoxysilane ca.ca.%

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WGK CLASSIFICATION (Water Resources Act in Germany):

WGK=1

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SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986(SARA)

TITLE III SECTION 313 SUPPLIER NOTIFICATION:

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the emergency planning and community Right-To-Know Act of 1986 and 40 CFR 372.

This information must be included in all MSDS's that are copied and distributed for the material.

The toxic chemical(s) contained in this product are:

CHEMICAL NAME/(CAS No.) AND CONTENTS

\*\* None \*\*

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CALIFORNIA PROPOSITION 65:

This regulation requires a warning for California Proposition 65 Chemical(s) under the statute.

The California Proposition 65 Chemical(s) contained in this product are:

CHEMICAL NAME/(CAS No.) AND CONTENTS

Toluene/(108-88-3) : ca.0.5 %



**SECTION 16. OTHER INFORMATION**

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For Industrial Use Only

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This materials safety data sheet is offered solely for your information, consideration and investigation.

The data described in this MSDS consist of data on literature, our acquisitional data and analogical inference by data of similar chemical substance or product.

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