

**MATERIAL SAFETY DATA SHEET****SECTION 1. COMPANY IDENTIFICATION**

## COMPANY IDENTIFICATION

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

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

EMERGENCY TELEPHONE NUMBER:

743-7277 (Shin-Etsu Singapore Pte., Ltd.)

TELEPHONE NUMBER FOR INFORMATION:

03-3246-5121 (Tokyo, JAPAN)

743-7277 (Shin-Etsu Singapore Pte., Ltd.)

DATA PREPARED : 01/19/1994

LAST REVISION : 01/27/2014

DATA ISSUED : 05/07/2014

ISSUE NO 201405000111

BASE NO 12

PRODUCT NAME :

**KBE-903**

PRODUCT CLASSIFICATION:

Silane Coupling Agent

**SECTION 2. COMPOSITION**

SINGLE OR MIXTURE:

Single

CHEMICAL IDENTIFICATION:

3-Aminopropyltriethoxysilane

HAZARDOUS COMPONENT(S)/(CAS No.):

3-Aminopropyltriethoxysilane/(919-30-2) : 100%

(See Section 8 of this MSDS for Exposure Guideline)

**SECTION 3. HAZARDS IDENTIFICATION**

HAZARDS CLASSIFICATION:

Corrosives (based on IMO)

Corrosive (based on DOT)

FIRE AND EXPLOSION:

Not considered flammable nor combustible, but will burn if involved in a fire.

POTENTIAL HEALTH EFFECT:

INHALATION ; May cause irritation to mucous membranes and upper respiratory tract.

SKIN contact ; May cause severe skin irritation, prolonged and extensive contact may result in skin

burns.  
Kidney injury could occur by skin absorption.  
May cause allergic skin reaction.  
EYES contact ; Cause severe eyes irritation, with burn of  
cornea.  
INGESTION ; Harmful

---

**SECTION 4. FIRST AID MEASURES**

---

INHALATION ; Remove to fresh air.  
SKIN contact ; 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.

---

**SECTION 5. FIRE FIGHTING MEASURES**

---

## FLASH POINT(method used):

98 degrees C (Open cup)  
95 degrees C (Closed cup)

## FLAMMABLE LIMITS:

LOWER: Not measured UPPER: Not measured

## EXTINGUISHING MEDIA:

Foam, dry chemical or carbon dioxide

## SPECIAL FIRE FIGHTING PROCEDURE:

Wear eye/face protection and protective clothing.

## UNUSUAL FIRE AND EXPLOSION HAZARD:

Burning can produce nitrogen oxides, a toxic and corrosive gas.

---

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

---

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

Shut off all ignition sources.  
Wear appropriate protective equipment.  
Contain the spill or leak.  
Scrape up with rag or other absorbent material and place in  
container.

---

**SECTION 7. HANDLING AND STORAGE**

---

## 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 with adequate ventilation.  
Avoid breathing vapor.  
Avoid contact with eyes, skin and clothing.  
Wear suitable gloves and eye/face protection.  
Avoid contact with water or moisture.  
Keep out of reach of children.  
\* \* \* \* \* Information about the emptied container \* \* \* \* \*  
Do not re-use this container.  
This container will be very 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.

---

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

---

## EXPOSURE GUIDELINES:

ACGIH TLV-TWA : Not established,  
OSHA PEL : Not established [3-Aminopropyltriethoxysilane]  
ACGIH TLV-TWA : 1000ppm,  
OSHA PEL : 8H TWA 1000ppm  
[Ethanol ; decomposed product]

## RESPIRATORY PROTECTION(specify type):

Not required

## VENTILATION:

LOCAL EXHAUST: Recommended  
MECHANICAL(general): Adequate ventilation system  
SPECIAL: Unknown  
OTHER: Unknown

## PROTECTIVE GLOVES:

Plastic film or rubber gloves

## EYE PROTECTION:

Face shield or protective goggles

## OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Safety shower and eyewash equipment

## WORK/HYGIENIC PRACTICES:

Keep away from heat, sparks and flame.  
Avoid breathing vapor.  
Avoid contact with eyes and skin.  
Wear suitable gloves and eye/face protection.  
Wash hands and gargle after handling.

---

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

---

## BOILING POINT:

217 degrees C

## VAPOR PRESSURE:

&lt;10mmHg (25 degrees C)

## VAPOR DENSITY(air=1):

7.6

## SPECIFIC GRAVITY:

0.94 (25 degrees C)

## MELTING POINT:

Not measured

## EVAPORATION RATE:

&lt;1 (Butyl Acetate=1)

## SOLUBILITY IN WATER:

Soluble

## APPEARANCE(color):

Light yellow, transparent

## APPEARANCE(form):

Liquid

## ODOR:

Amine odor

---

**SECTION 10. STABILITY AND REACTIVITY**

---

## STABILITY:

Stable

## CONDITION TO AVOID:

Hydrolyzed with water, but no hazard.

## INCOMPATIBILITY(material to avoid):

Mineral acids and water.

Strong oxidizing materials.

## HAZARDOUS DECOMPOSITION OR BY-PRODUCT:

Water, acids or alkalis can cause ethanol.

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.

## HAZARDOUS POLYMERIZATION:

Will not occur

## CONDITION TO AVOID:

None

---

**SECTION 11. TOXICOLOGICAL INFORMATION**

---

## SKIN IRRITATION:

SKIN-RABBIT : 5mg/24Hr SEVERE

## EYE IRRITATION:

EYE-RABBIT : 0.75mg/24Hr SEVERE

SENSITIZATION:

Positive (Guinea pig)

ACUTE TOXICITY(LD50):

LD50(Oral/Rat) : 1570 - 3650mg/kg, LD50(Dermal/Rat) : 4.29g/kg

ACUTE TOXICITY(LC50):

No information is available.

CHRONIC TOXICITY:

No information is available.

MUTAGENICITY:

Negative(Ames Test)

CARCINOGENICITY:

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

OTHER INFORMATION:

None

---

**SECTION 12. ECOLOGICAL INFORMATION**

---

BIODEGRADATION:

No information is available.

BIOACCUMULATION:

No information is available.

AQUATIC TOXICITY:

No information is available.

OTHER INFORMATION:

Causes easily hydrolysis in water or atmosphere.

---

**SECTION 13. DISPOSAL CONSIDERATIONS**

---

Can be burned in a chemical incinerator equipped with an afterburner and scrubber.

Do not dispose of the emptied container unless the contents have been completely removed and container has been flushed with a clean neutral solvent and then dried up.

Do not dispose the emptied container unlawfully.

Observe all federal, state, and local laws.

---

**SECTION 14. TRANSPORT INFORMATION**

---

<IMO INFORMATION>

UN No.:

UN 3267

CLASSIFICATION AND CLASS:

Corrosives / Class 8

PACKAGING GROUP:

II

PROPER SHIPPING NAME:



Corrosive Liquid, Basic, Organic, N.O.S.

TECHNICAL SHIPPING NAME:

3-aminopropyltriethoxysilane

MARINE POLLUTANT:

None

\*\*\*\*\*

<DOT INFORMATION>

ID No. (49CFR 172.101):

UN 3267

HAZARD CLASS(49CFR 172.101):

8, Corrosive

PACKING GROUP(49CFR 172.101):

II

PROPER SHIPPING NAME(49CFR 172.101):

Corrosive Liquid, Basic, Organic, N.O.S.

TECHNICAL SHIPPING NAME:

3-aminopropyltriethoxysilane

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.

\*\*\*\*\*

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 \*\*

\*\*\*\*\*

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

\*\* None \*\*

SECTION 16. OTHER INFORMATION



For Industrial Use Only

\*\*\*\*\*

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.

Shin-Etsu Chemical Co., Ltd. provides no warranties, either express or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein.

---