

## MATERIAL SAFETY DATA SHEET (MSDS) of KH-567

### 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1	<b>Production name:</b>	KH-567 SILANE
1.2	<b>Generic Description:</b>	epoxy silane
1.3	<b>Chemical name:</b>	2-(3, 4-Epoxy cyclohexyl)ethyl]triethoxysilane
1.4	<b>Profile:</b>	Health
1.5	<b>IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY</b>	
	<b>Manufacturer:</b>	Nanjing Capatue Chemical Co., Ltd
	<b>Address:</b>	No. 20 JiangJun Avenue, Jiangning Development Zone, Nanjing, Jiangsu Province, P. R. China (211100)
	<b>Telephone:</b>	(0086-25)-86371193 Fax: (0086-25) 86371191-0
	<b>24Hour Emergency Telephone:</b>	(0086-25)-86371192
	<b>Connect with:</b>	Anhuanbu
1.6	<b>Use of the substance / Preparation</b>	For industry use
1.7	<b>Function</b>	Surface modifier, raw material.

### 2. HAZARDS IDENTIFICATION

May cause sensitization by skin contact.  
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Information on ingredients / Hazardous components

2-(3, 4-Epoxy cyclohexyl)ethyl]triethoxysilane

CAS No.	10217-34-2	EC No.	425-050-4
Symbol(s)	Xi	Concentration %	> 85,000
Rphrase(s)	R43, R52/53		

See chapter 16 for text of risk phrases.

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4. FIRST AID MEASURES		
4.1	<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
4.2	<b>Skin:</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before re-use. Obtain medical attention.
4.3	<b>Inhalation:</b>	Remove to fresh air. Artificial respiration and/or oxygen may be necessary. Obtain medical attention immediately.
4.4	<b>Ingestion:</b>	If conscious, drink plenty of water. Induce vomiting if person is conscious. Obtain medical attention immediately.

5. FIRE FIGHTING MEASURES	
<b>Suitable extinguishing media</b>	Alcohol-resistant foam Carbon dioxide (CO <sub>2</sub> ) Dry chemical
<b>Special protective equipment for fire-fighters</b>	Wear self-contained breathing apparatus and protective suit.
<b>Further information</b>	Do not direct a solid stream of water or foam into hot, burning pools: this may cause frothing and increase fire intensity. Cool closed containers exposed to fire with water spray.

6. ACCIDENTAL RELEASE MEASURES	
6.1	<b>Personal precautions:</b> Avoid contact with skin, eyes and clothing. Avoid contact with liquid and vapors. Use personal protective equipment.
6.2	<b>Environment precautions:</b> Do not flush into surface water or sanitary sewer system.
6.3	<b>Methods for cleaning up:</b> Soak up with inert absorbent material. Shovel into suitable container for disposal.

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### 7. HANDLING AND STORAGE

#### 7.1 Handling

##### Safe handling advice

Do not swallow. Avoid contact with skin, eyes and clothing.

Avoid breathing vapor, aerosol and mist. Ensure adequate ventilation. Wash hands before breaks and immediately after handling the product.

#### 7.2 Advice on protection against and explosion

Normal measures for preventive fire protection.

#### 7.3 Storage

##### Requirements for storage areas and containers

Keep container tightly closed. Keep away from heat and sources of ignition.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Components with workplace control parameters

##### Engineering measures

Use only in an area equipped with a safety shower.

Eye wash bottle with pure water

General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment.

Special, local ventilation is needed at points where vapors can be expected to escape to the workplace air.

##### Personal protective equipment

##### Respiratory protection

Respirator with an ABEK filter; at high concentration use respiratory protection with independent air supply.

##### Hand protection

##### Glove material

For example, butyl-rubber

Neoprene

Nitrile rubber

Polyvinylchloride

##### Eye protection:

safety glasses

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Skin and body protection:

Safety shoes

Protective suit

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical Form:</b>	Liquid
<b>Color:</b>	Colorless, low-viscosity liquid
<b>Odor:</b>	Characteristic
<b>Relative vapour density:</b>	>1
<b>Boiling Point (760mmHg), °C :</b>	300
<b>Vapour pressure:</b>	< 1,33 hPa at 20 °C
<b>Solubility in Water:</b>	Reacts slowly
<b>Melting point:</b>	< 0 °C
<b>Flash Point °C:</b>	129 Method: ASTM D 93
<b>Specific gravity(<math>\rho_{20}</math>), g/cm<sup>3</sup></b>	1,00
<b>Evaporation rate:</b>	<1

**Note:** The above information is not intended for use in preparing product specifications. Contact Capatue Chemical before writing specifications.

### 10. STABILITY AND REACTIVITY

<b>10.1 Conditions to avoid</b>	None known.
<b>10.2 Materials to Avoid:</b>	Oxidizing agents. Amines Alkalis. Reacts with water or moisture to form: ethanol
<b>10.3 Hazardous decomposition products:</b>	Oxides of carbon. Oxides of silicon.

### 11. TOXICOLOGICAL INFORMATION

<b>Acute oral toxicity:</b>	LD50 Rat. Dose: > 5.000 mg/kg
<b>Acute dermal toxicity</b>	LD50 Rabbit. Dose: > 2.000 mg/kg
<b>Skin irritation:</b>	Rabbit. Result: Minor irritation

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<b>Eye irritation:</b>	Rabbit. Result: Slight irritation
<b>Sensitization:</b>	guinea pig Result: positive Method: OECD Test Guideline 406
<b>Genetic toxicity in vitro:</b>	Test type: Salmonella Typhimurium/ Escherichia coli Result: Negative Test type: Chinese Hamster Ovary (CHO) Result: Negative Test type: Unscheduled DNA synthesis (UDS) Result: Negative Test type: SCE sister chromatid exchange Result: Negative
<b>Genetic toxicity in vivo:</b>	Test type: Micronucleus test (mouse) Result: Negative Test type: Chromosome aberration study in cultured peripheral human lymphocytes Result: Positive
<b>Repeated dose toxicity:</b>	Rat. Exposure time: 28 d NOEL: 1.000 mg/kg : Rat. Exposure time: 90 d NOEL: 1.000 mg/kg Daily dosage
<b>Carcinogenicity:</b>	Mouse skin painting - Result: negative

### 12. ECOLOGICAL INFORMATION

<b>Toxicity to fish:</b>	LC50 Species: Cyprinus carpio Dose: 42,3 mg/l Method: OECD Test Guideline 203
<b>Toxicity to other organisms:</b>	EC50 Species: Daphnia magna (Water flea) Dose: 58 mg/l Method: OECD Test Guideline 202
<b>Toxicity to algae:</b>	EC50

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	Species: Algae Dose: 36 mg/l Method: OECD Test Guideline 201
<b>Toxicity to bacteria:</b>	IC50 Species: Bacterae Dose: > 100 mg/l Method: OECD-Guideline No. 209

### 13. DISPOSAL CONSIDERATIONS

<b>Product:</b>	Can be incinerated, when in compliance with local regulations
<b>Contaminated packaging:</b>	Dispose of as unused product.

### 14. TRANSPORT INFORMATION

**Transport / further information**

This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

### 15. REGULATORY INFORMATION

**Labeling according to EC Directives**

**Statutory basis / list**

<b>Symbol(s)</b>	<b>Xi</b>	Irritant
<b>R-phrases(s):</b>	<b>R43</b>	May cause sensitization by skin contact.
	<b>R52/53</b>	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>S-phrases(s):</b>	<b>S24</b>	Avoid contact with skin
	<b>S37</b>	Wear suitable gloves
	<b>S61</b>	Avoid release to the environment. Refer to special instructions/safety data sheets.

**National legislation**

WGK 1 slightly water endangering

Water contaminating class:

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### 16. OTHER INFORMATION

**Risk phrase (R phrase) texts**

R43            May cause sensitization by skin contact

R52/53        Harmful to aquatic organisms, may cause long-term  
adverse effects in the aquatic environment.

Prepared by:                                Nanjing Capatue Chemical Co., Ltd

These data are offered in good faith as typical values and not as product specifications. No warranty, either 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.