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SECTION 1: Identification of the substance/mixture and of the company**Product Identifier**

Product Name: SiSiB® PC2300
 Chemical Name: 3-trimethoxysilylpropane-1-thiole
 CAS-No.: 4420-74-0
 EC-No.: 224-588-5

Relevant identified uses of the substance or mixture and uses advised against

Relevant applications identified For industrial use
 Coupling agent
 Crosslinking agents
 Surface modifier

Details of the supplier of the safety data sheet

Company Nanjing SiSiB Silicones Co., Ltd.
 Guanghua Sci & Tech Industrial Zone,
 No. 104, Guanghua Road, Nanjing 210007, P.R.China
 Email: SDS@SiSiB.com

Emergency Telephone Number: +86-25-8468-0091

SECTION 2: Hazardous identification**Classification of the substance or mixture****Classification according to REGULATION (EC) No 1272/2008[CLP]**

Acute toxicity, Oral	Category 4	H302
Skin sensitization	Category 1	H317
Chronic aquatic toxicity	Category 2	H411

Label elements**Labelling as per (EU) 1272/2008**

Statutory basis EU-CLP as per Regulation (EU) No. 1272/2008
 Pictogram



Signal word	Warning
Hazard statement(s)	
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.

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H411	Toxic to aquatic life with long lasting effects.
Precautionary statement prevention	
P273	Avoid release to the environment.
P280	Wear protective gloves.
Precautionary statement Reaction	
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of water/ soap.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P330	Rinse mouth.
Precautionary statement Disposal	
P501	Dispose of contents/container in accordance with local regulation.

Other hazards

A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out.

SECTION 3: Composition/information on ingredients

Substances

Information on ingredients / Hazardous components as per EU-CLP Regulation (EC) No.1272/2008

3-trimethoxysilylpropane-1-thiole					
CAS-No.	4420-74-0	EC-No.	224-588-5		
Acute toxicity (Oral)				Category 4	H302
Skin Sensitization				Category 1	H317
Chronic aquatic toxicity				Category 2	H411

Texts of H phrases, see in Chapter 16

Mixtures

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SECTION 4: First aid measures

Description of first aid measures

Remove contaminated or saturated clothing.

If inhaled

If aerosol or mists are formed:

Move victims into fresh air.

If symptoms persist, consult a physician for treatment.

In case of skin contact

Wash off immediately with plenty of water.

In case of eye contact

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Rinse thoroughly with plenty of water keeping eyelid open.
In case of persistent discomfort: Consult an ophthalmologist.

If swallowed

Have the mouth rinsed with water.
Call a physician immediately.

Most important symptoms and effects, both acute and delayed**Symptoms**

After absorbing large amounts of substance:
Liberation of reaction products (Methanol) can lead to symptoms of poisoning.
Possible signs of poisoning:
daze, dizziness, nausea, colicky abdominal pain, respiratory disturbance.
Symptoms upon increasing intoxication: dysopia, loss of eyesight.

Indication of any immediate medical attention and special treatment needed

Treatment:

Immediate gastric lavage. Antidote treatment, correction of acid-base balance.

Detection of substance (Methanol) possible in:

Blood

Antidote treatment: ethanol.

Allergic reactions cannot be excluded.

Treatment of allergic reaction if necessary.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing media**

Foam water spray Carbon dioxide (CO2) dry powder

Unsuitable extinguishing media

high volume water jet

Special hazards arising from the substance or mixture

Standard procedure for chemical fires.

Advice for firefighters

Water used to extinguish fire should not enter drainage systems, soil or stretches of water.
Ensure there are sufficient retaining facilities for water used to extinguish fire.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
In case of fire: wear a self-contained respiratory apparatus

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

Ensure adequate ventilation.

Environmental precautions:

Do not allow entrance in sewage water, soil stretches of water, groundwater, drainage systems.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Fill into marked, sealable containers.

To be disposed of in compliance with existing regulations.

Reference to other sections

Wear personal protective equipment; see section 8.

Disposal considerations; see section 13.

SECTION 7: Handling and storage**Precautions for safe handling**

Ventilators required at emission site.

Conditions for safe storage, including any incompatibilities**Advice on protection against fire and explosion**

Take precautionary measures against static discharges.

Keep away from sources of ignition - No smoking.

Storage

Keep containers tightly closed in a cool, well-ventilated place.

Protect from moisture.

Specific end use(s)

No further information available

Applications; see Section 1.

SECTION 8: Exposure Controls/Personal Protection**Control parameters****Exposure controls****Engineering measures**

Provide for good ventilation if vapors/aerosols are formed.

Personal protective equipment**Respiratory protection**

In case of dusts/vapors/aerosols being formed or if the limit values like TLV are exceeded:

use respiratory equipment with suitable filter (filter type ABEK) or wear a self-contained respiratory apparatus

Use only respiratory protection equipment with CE-symbol including four digit test number.
The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
Note time limit for wearing respiratory protective equipment.

Hand protection

Glove material	for example, butyl-rubber
Material thickness	0,5 mm
Break through time	>= 480 min
Glove material	for example, Fluorinated rubber (Viton)
Material thickness	0,4 mm
Break through time	>= 480 min

Selection of protective gloves to meet the requirements of specific workplaces.

Suitability for specific workplaces should be clarified with protective glove manufacturers.

The information is based on our own tests, references from the literature and information from glove manufacturers, or derived by analogy with similar materials.

Remember that the useful time per day of a chemical protection glove may be much shorter than the permeation time determined according to EN 374 due to the many different influential factors involved (e.g. temperature).

Eye protection

Safety glasses

Skin and body protection

suitable protective clothing - Use disposable clothing if appropriate.

Hygiene measures

When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work.

Remove contaminated or saturated clothing.

Wash contaminated clothing before re-use.

Protective measures

Handle in accordance with good industrial hygiene and safety practice.

The personal protective equipment used must meet the requirements of directive 89/686/EEC and amendments (CE certification).

If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used.

If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used.

Do not breathe in vapors or aerosols.

Avoid contact with skin and eyes.

SECTION 9: Physical and Chemical Properties**Information on basic physical and chemical properties**

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Appearance	
Form:	clear liquid
Color	colorless to yellowish
Physical state	liquid
Odor	ester-like
Odor Threshold	no data available
pH	no data available
Melting point/range	no data available
Boiling point/range	85 °C (4 hPa)
	Method: DIN 51356
Flash point:	85 ⁰ C
	Method: DIN 51758
Evaporation rate	no data available
Lower explosion limit	not determined
Upper explosion limit	not determined
Vapor pressure:	0,2 hPa (20 °C)
Density:	1,06 g/cm ³ (20 °C)
	Method: DIN 51757
Water solubility:	decomposition by hydrolysis
Partition coefficient: n-octanol/water	no data available
Thermal decomposition	not determined
Viscosity, dynamic	2 mPa.s (20 °C)
	Method: DIN 53 015
Other safety information	
Ignition temperature	no data available

SECTION 10: Stability And Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No dangerous reactions known.

Conditions to avoid

Protect from moisture.

Incompatible materials

Water

Hazardous decomposition products

Methanol in case of hydrolysis.

Alcohol formed by hydrolysis lowers the flash point of the product.

SECTION 11: Toxicological Information**Information on toxicological effects****Acute oral toxicity**

LD50 rat (male): 933 mg/kg

LD50 Rat(female): 774 mg/kg

Acute dermal toxicity

LD50 Rat(male): 2608 mg/kg

Assessment: The substance or mixture has no acute dermal toxicity

LD50 Rat(female): 2268 mg/kg

Assessment: The substance or mixture has no acute dermal toxicity

Skin irritation

Rabbit

No skin irritation

Eye irritation

Rabbit

No eye irritation

Method: OECD Test Guideline 405

Sensitization

Buehler Test Guinea pig: May cause sensitization by skin contact.

Method: OECD Test Guideline 406

Assessment of STOT single exposure

no evidence for hazardous properties

Assessment of STOT repeat exposure

no evidence for hazardous properties

Risk of aspiration toxicity

No evidence of aspiration toxicity

Gentoxicity in vitro

No data available

Carcinogenicity

No data available

Toxicity to reproduction

No data available

SECTION 12: Ecological Effects**Toxicity**

Toxicity to fish

LC50 Brachydanio rerio (zebrafish): 439 mg/l / 96 h

Method: EC 92/69

LC0 Brachydanio rerio (zebrafish): 350 mg/l / 96 h

Method: EC 92/69

Toxicity in aquatic invertebrates

EC50 Daphnia magna (Water flea): 6,7 mg/l / 48 h

Method: EC 92/69

Toxicity to algae

EC50 Desmodesmus subspicatus (green algae): 267 mg/l / 72 h

Method: EC 92/69

Toxicity to bacteria

EC 10 activated sludge, mixed population: 440 mg/l / 3 h

Method: EG L133/118 (5.88)

in case of breathing test EC50 is concerned

Persistence and degradability

Biodegradability

Result: 51 % Not readily biodegradable.

Method: EC 92/69

Bioaccumulative potential

no data available

Mobility in soil

no data available

Results of PBT and vPvB assessment

A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out.

Other adverse effects

Further Information: Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**Waste treatment methods****Product:**

With respect to local regulations, e.g. dispose of to suitable waste incineration plant.

Uncleaned packaging

Do not reuse empty containers and dispose of in accordance with the regulations issued by the appropriate local authorities.

If there is product residue in the emptied container, follow directions for handling on the container's label.

Incorrect disposal or reuse of this container is illegal and can be dangerous.

Other countries: observe the national regulations.

Waste Key Number

No waste key number as per the European Waste Types List can be assigned to this product, since such classification is based on the (as yet undetermined) use to which the product is put by the consumer.

The waste key number must be determined as per the European Waste Types List (decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm / producing firm / official authority.

SECTION 14: Transport Information**Transport on land (ADR/RID/GGVSEB)**

UN number	UN 3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(3-mercaptopropyl-trimethoxysilane)
Transport hazard class(es)	9
Packing group	III
Environmental hazards	Yes
Special precautions for user	Yes

ADR: Tunnel Restriction Code: (-)

Inland waterway transport (ADN/GGVSEB (Germany))

UN number:	UN 3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(3-mercaptopropyl-trimethoxysilane)
Transport hazard class(es):	9
Packing group:	III
Environmental hazards:	Yes
Special precautions for user:	No

Air transport ICAO-TI/IATA-DGR

UN number:	UN 3082
UN proper shipping name:	Environmentally hazardous substance, liquid, n.o.s.(3-mercaptopropyl-t rimethoxysilane)
Transport hazard class(es):	9
Packing group:	III
Environmental hazards:	Yes
Special precautions for user:	Yes

IATA-C: ERG-Code 9L

IATA-P: ERG-Code 9L

Sea transport IMDG-Code/GGVSee (Germany)

UN number:	UN 3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(3-mercaptopropyl-trimethoxysilane)
Transport hazard class(es):	9

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Packing group: III
Environmental hazards: Yes
Special precautions for user: No
EmS: F-A,S-F
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
for transport approval see regulatory information

SECTION 15:Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National legislation

Major Accident Hazard Legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

listing: ENVIRONMENTAL HAZARDS (E2)

quantity: 200 t 500 t

Chemical Safety Assessment

No substance-related safety assessment is necessary / has been conducted for this product.

SECTION 16:Other Information

Relevant H phrases from chapter 3

H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Further information

It must be recognized that the physical and chemical properties of any product may not be fully understood and that new, possibly hazardous products may arise from reactions between chemicals. The information given in this data sheet is based on our present knowledge and shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.