

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

Product Name: SiSiB® PC1412  
Chemical Name: [3-(1-PIPERAZINYL)PROPYL]METHYLDIMETHOXYSILANE

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

Relevant applications identified For industrial use

**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 (GHS-US)**

Skin Irrit. 2 H315

Eye Irrit. 2A H319

Full text of H-phrases: see section 16.

**Label elements****GHS-US labeling**

Hazard pictograms (GHS-US)



GHS07

Signal word (GHS-US): Warning

**Hazard statements (GHS-US):**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

**Precautionary statements (GHS-US):**

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P264 - Wash hands thoroughly after handling

P302+P352 - If on skin: Wash with plenty of soap and water

P332+P313 - If skin irritation occurs: Get medical advice/attention

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337+P313 - If eye irritation persists: Get medical advice/attention

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P321 - Specific treatment (see first aid instructions on this label)

P362+P364 - Take off contaminated clothing and wash it before reuse

**Other hazards**

No additional information available

**Unknown acute toxicity (GHS US)**

No data available

**SECTION 3: Composition/information on ingredients****Substances**

Substance type: Mono-constituent

Name: [3-(1-PIPERAZINYL)PROPYL]METHYLDIMETHOXY SILANE

CAS No: 128996-12-3

| Name   | Product identifier   | %    | Classification (GHS-US)   |
|--|----------------------|------|---|
| [3-(1-Piperazinyl)propyl]methyldimethoxysilane | (CAS No) 128996-12-3 | > 95 | Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319  |
| methanol                                       | (CAS No) 67-56-1     |      | Flam. Liq. 2, H225<br>Acute Tox. 3 (Oral), H301<br>Acute Tox.3 (Dermal), H311<br>AcuteTox.3 (Inhalation: vapour), H331<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 1, H370<br>STOT SE 3, H336 |

**Mixture**

Not applicable

**SECTION 4: First aid measures****Description of first aid measures****First-aid measures general**

Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label. IF exposed or concerned: Get medical advice/attention.

**First-aid measures after inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

**First-aid measures after skin contact**

Wash with plenty of soap and water. Get medical advice/attention.

**First-aid measures after eye contact**

Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

**First-aid measures after ingestion**

Never give anything by mouth to an unconscious person. Get medical advice/attention.

**Most important symptoms and effects, both acute and delayed****Symptoms/injuries after inhalation**

May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.

**Symptoms/injuries after skin contact**

Causes skin irritation.

**Symptoms/injuries after eye contact**

Causes serious eye irritation.

**Symptoms/injuries after ingestion**

May be harmful if swallowed.

**Chronic symptoms**

On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system.

**Indication of any immediate medical attention and special treatment needed**

NOTE TO PHYSICIAN: This product reacts with water in the acid contents of the stomach to form methanol. The combination of visual disturbances, metabolic acidosis and formic acid in urine is evidence of methanol poisoning. The therapeutic intravenous administration of ethanol (10 mls/hour) allows methanol to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated with intravenous administration of sodium bicarbonate and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance.

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

Water spray. Foam. Carbon dioxide. Dry chemical.

**Unsuitable extinguishing media**

None known.

**Special hazards arising from the substance or mixture**

Fire hazard:

Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

**Advice for firefighters**

Firefighting instructions:

Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.

Protection during firefighting:

Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapor and mist.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Protective equipment:

Wear protective equipment as described in Section 8.

Emergency procedures:

Evacuate unnecessary personnel.

#### For emergency responders

Protective equipment:

Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

#### Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### Methods and material for containment and cleaning up

For containment:

Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up:

Cleaning up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.

#### Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### Precautions for safe handling

Avoid all eye and skin contact and do not breathe vapor and mist. Provide good ventilation in process area to prevent accumulation of vapors.

### Hygiene measures

Washing hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

### Conditions for safe storage, including any incompatibilities

Technical measures:

Ground/bond container and receiving equipment.

Storage conditions:

Keep container tightly closed.

Incompatible materials:

|              |             |                          |
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Acids. Alcohols. Oxidizing agent. Peroxides. Water.

Storage area:

Store in a well-ventilated place. Store away from heat.

**Specific end use(s)**

No additional information available

### SECTION 8: Exposure Controls/Personal Protection

**Control parameters**

**Methanol (67-56-1)**

|           |                                       |                       |
|-----------|---------------------------------------|-----------------------|
| USA ACGIH | ACGIH TWA (ppm)                       | 200 ppm               |
| USA ACGIH | ACGIH STEL (ppm)                      | 250 ppm               |
| USA NIOSH | NIOSH REL (TWA) (mg/m <sup>3</sup> )  | 260 mg/m <sup>3</sup> |
| USA NIOSH | NIOSH REL (TWA) (ppm)                 | 200 ppm               |
| USA NIOSH | NIOSH REL (STEL) (mg/m <sup>3</sup> ) | 325 mg/m <sup>3</sup> |
| USA NIOSH | NIOSH REL (STEL) (ppm)                | 250 ppm               |
| USA OSHA  | OSHA PEL (TWA) (mg/m <sup>3</sup> )   | 260 mg/m <sup>3</sup> |
| USA OSHA  | OSHA PEL (TWA) (ppm)                  | 200 ppm               |
| USA IDLH  | US IDLH (ppm)                         | 6000 ppm              |

**Exposure controls**

**Appropriate engineering controls:**

Provide local exhaust or general room ventilation.

**Personal protective equipment:**

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

**Hand protection:**

Neoprene or nitrile rubber gloves.

**Eye protection:**

Chemical goggles. Contact lenses should not be worn.

**Skin and body protection:**

Wear suitable protective clothing.

**Respiratory protection:**

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor - amine gas (brown cartridge) respirator.

### SECTION 9: Physical and Chemical Properties

**Information on basic physical and chemical properties**

|                 |                     |
|-----------------|---------------------|
| Physical state: | Liquid              |
| Appearance      | Form: clear, liquid |

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|   |                        |
|---|------------------------|
| Molecular mass:                                 | 232.4 g/mol            |
| Color:  | Straw                  |
| Odor  | Amine Ammonia-like     |
| Odor Threshold                                  | No data available      |
| Refractive index:                               | 1.4628                 |
| pH  | No data available      |
| Relative evaporation rate<br>(butyl acetate=1): | < 1                    |
| Melting point;                                  | No data available      |
| Freezing point:                                 | < 0 °C                 |
| Boiling point:                                  | 110 - 112 °C @ 1 mm Hg |
| Flash point                                     | 123 °C                 |
| Auto-ignition temperature:                      | No data available      |
| Decomposition temperature:                      | No data available      |
| Flammability (solid, gas):                      | No data available      |
| Vapor pressure:                                 | No data available      |
| Relative vapor density at 20 °C:                | > 1                    |
| Relative density:                               | 0.986                  |
| Solubility:                                     | Reacts with water.     |
| Log Pow:  | No data available      |
| Log Kow:  | No data available      |
| Viscosity, kinematic:                           | No data available      |
| Viscosity, dynamic:                             | No data available      |
| Explosive properties:                           | No data available      |
| Oxidizing properties:                           | No data available      |
| Explosion limits:                               | No data available      |

**Other information**

No additional information available.

**SECTION 10: Stability And Reactivity****Reactivity**

No additional information available

**Chemical stability**

Stable when stored in sealed containers.

**Possibility of hazardous reactions**

Reacts with water and moisture in air, liberating methanol

**Conditions to avoid**

Heat. Open flame. Sparks.

**Incompatible materials**

Acids. Alcohols. Moisture. Oxidizing agent. Peroxides. Water.

**Hazardous decomposition products**

Organic amine vapors.

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

Not classified

**methanol (67-56-1)**

LC50 inhalation rat (ppm) 22500 ppm (Exposure time: 8 h)

ATE US (oral) 100.000 mg/kg body weight

ATE US (dermal) 300.000 mg/kg body weight

ATE US (vapors) 3.000 mg/l/4h

**Skin corrosion/irritation:**

Causes skin irritation.

**Serious eye damage/irritation:**

Causes serious eye irritation

**Respiratory or skin sensitization:**

Not classified

**Germ cell mutagenicity:**

Not classified

**Carcinogenicity:**

Not classified

**Reproductive toxicity:**

Not classified

**Specific target organ toxicity (single exposure):**

Not classified

**Specific target organ toxicity (repeated exposure):**

Not classified

**Aspiration hazard:**

Not classified

**Symptoms/injuries after inhalation:**

May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.

**Symptoms/injuries after skin contact:**

Causes skin irritation.

**Symptoms/injuries after eye contact:**

Causes serious eye irritation

**Symptoms/injuries after ingestion:**

May be harmful if swallowed

**Chronic symptoms:**

On contact with water this compound liberates methanol which is known to have a chronic effect on the

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central nervous system.

**Reason for classification:**

Expert judgment

**SECTION 12: Ecological Effects****Toxicity****methanol (67-56-1)**

LC50 fish 1

28200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

LC50 fish 2

> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

**Persistence and degradability**

No additional information available

**Bioaccumulative potential****methanol (67-56-1)**

BCF fish 1 < 10

Log Pow -0.77

**Mobility in soil**

No additional information available

**Other adverse effects**

Other adverse effects: This substance may be hazardous to the environment.

Effect on ozone layer: No additional information available

Effect on the global warming: No known ecological damage caused by this product.

**SECTION 13: Disposal considerations****Waste treatment methods****Sewage disposal recommendations:**

Do not dispose of waste into sewer.

**Waste disposal recommendations:**

Dispose in a safe manner in accordance with local/national regulations.

**Ecology - waste materials:**

Avoid release to the environment.

**SECTION 14: Transport Information****UN number**

Not regulated for transport.

**UN proper shipping name**



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Not applicable

**Additional information****Other information:**

No supplementary information available.

**Transport by sea:**

No additional information available

**Air transport**

No additional information available

**SECTION 15:Regulatory Information****US Federal regulations****[3-(1-Piperazinyl)propyl]methyldimethoxysilane (128996-12-3)**

TSCA Exemption/Exclusion

CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

**[3-(1-Piperazinyl)propyl]methyldimethoxysilane (128996-12-3)**

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

**methanol (67-56-1)**

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313

SARA Section 313 - Emission Reporting 1.0 %

**International regulations****methanol (67-56-1)**

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Substances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on the Japanese ENCS (Existing &amp; New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Japanese Poisonous and Deleterious Substances Control Law

Listed on the Canadian IDL (Ingredient Disclosure List)

Listed on INSQ (Mexican national Inventory of Chemical Substances)

Listed on Turkish inventory of chemical

**US State regulations****[3-(1-Piperazinyl)propyl]methyldimethoxysilane(128996-12-3)**

U.S. - California - Proposition 65 - Carcinogens List

No

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|   |    |
|---|----|
| U.S. - California - Proposition 65 - Developmental Toxicity         | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity – Female | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity – Male   | No |
| <b>methanol (67-56-1)</b>   |    |
| U.S. - California - Proposition 65 - Carcinogens List               | No |
| U.S. - California - Proposition 65 - Developmental Toxicity         | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity – Female | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity – Male   | No |

### SECTION 16: Other Information

#### Full text of H-phrases:

|                                  |   |
|----------------------------------|---|
| Acute Tox. 3 (Dermal)            | Acute toxicity (dermal) Category 3                          |
| Acute Tox. 3 (Inhalation: vapor) | Acute toxicity (inhalation: vapor) Category 3               |
| Acute Tox. 3 (Oral)              | Acute toxicity (oral) Category 3                            |
| Eye Dam. 1                       | Serious eye damage/eye irritation Category 1                |
| Eye Irrit. 2A                    | Serious eye damage/eye irritation Category 2A               |
| Flam. Liq. 2                     | Flammable liquids Category 2                                |
| Skin Irrit. 2                    | Skin corrosion/irritation Category 2                        |
| STOT SE 1                        | Specific target organ toxicity (single exposure) Category 1 |
| STOT SE 3                        | Specific target organ toxicity (single exposure) Category 3 |
| H225                             | Highly flammable liquid and vapor                           |
| H301                             | Toxic if swallowed  |
| H311                             | Toxic in contact with skin                                  |
| H315                             | Causes skin irritation                                      |
| H318                             | Causes serious eye damage                                   |
| H319                             | Causes serious eye irritation                               |
| H331                             | Toxic if inhaled  |
| H336                             | May cause drowsiness or dizziness                           |
| H370                             | Causes damage to organs                                     |

#### 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.