SECTION 1: Identification of the substance/mixture and of the company

Product Identifier

Product Name: SiSiB® WR5050

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 according to Regulation (EC) No 1272/2008

Skin irritation	Category 2	H315

For the full text of the H-Statements mentioned in this Section, see Section 16.

Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word: WARNING

Hazard statements

H315 Causes skin irritation.

Precautionary statements

P264 Wash skin thoroughly after handling.
P280 Wear protective gloves.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Other hazards

None

SECTION 3: Composition/information on ingredients

Chemical nature: Silicone compound

Mixtures

This product is a mixture.

CASRN / EC-No. / Index-No.	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
CASRN 2943-75-1 EC-No. 220-941-2 Index-No. -	<= 14.0 %	Triethoxy(octyl)silane	Skin Irrit. - 2 - H315
CASRN 67-56-1 EC-No. 200-659-6 Index-No. 603-001-00-X	<= 0.12 %	methanol	Flam. Liq. - 2 - H225 Acute Tox. - 3 - H301 Acute Tox. - 3 - H331 Acute Tox. - 3 - H311 STOT SE - 1 - H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

Description of first aid measures

General advice

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

If inhaled

Move person to fresh air; if effects occur, consult a physician.

In case of skin contact

Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.

In case of eye contact

Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

If swallowed

No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Water spray, Alcohol-resistant foam, Carbon dioxide (CO2), Dry chemical

Unsuitable extinguishing media

None known.

Special hazards arising from the substance or mixture

Hazardous combustion products: Oxides of phosphorus Carbon oxides Silicon oxides

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health.

Advice for firefighters

Fire Fighting Procedures: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions:

Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

Precautions for safe handling:

Do not get on skin or clothing. Do not breathe dust. Do not swallow. Avoid contact with eyes. Keep container closed when not in use. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice.

Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Conditions for safe storage, including any incompatibilities:

Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.

Unsuitable materials for containers: None known.

Specific end use(s)

See the technical data sheet on this product for further information.

SECTION 8: Exposure Controls/Personal Protection

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
methanol	ACGIH	TWA	200 ppm
	ACGIH	STEL	250 ppm
	ACGIH	TWA	SKIN
	ACGIH	STEL	SKIN
	2006/15/EC	TWA	260 mg/m3 200 ppm
	2006/15/EC	TWA	SKIN
	GB EH40	TWA	266 mg/m3 200 ppm
	GB EH40	TWA	SKIN
	GB EH40	STEL	333 mg/m3 250 ppm
	GB EH40	STEL	SKIN
Ethanol	ACGIH	TWA	1,000 ppm
	ACGIH	STEL	1,000 ppm
	GB EH40	TWA	1,920 mg/m3 1,000 ppm

The following substance(s), which have Occupational Exposure Limit(s) (OEL), may be formed during handling or processing:

Ethanol

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
methanol	67-56-1	Methanol	Urine	End of shift (As soon as Possible after exposure ceases)	15 mg/l	ACGIH BEI

Derived No Effect Level

Triethoxy(octyl)silane

Workers

Acute systemic effects		Acute local effects		Long-term systemic effects		Long-term local effects	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
9.1 mg/kg bw/day	16 mg/m3	n.a.	n.a.	9.1 mg/kg bw/day	16 mg/m3	n.a.	n.a.

Consumers

Acute systemic effects			Acute local effects		Long-term systemic effects			Long-term local effects	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
6.2 mg/kg bw/day	5.4 mg/m3	6.2 mg/kg bw/day	n.a.	n.a.	6.2 mg/kg bw/day	5.4 mg/m3	6.2 mg/kg bw/day	n.a.	n.a.

methanol

Workers

Acute systemic effects		Acute local effects		Long-term systemic effects		Long-term local effects	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
40 mg/kg bw/day	260 mg/m3	n.a.	260 mg/m3	40 mg/kg bw/day	260 mg/m3	n.a.	260 mg/m3

Consumers

Acute systemic effects			Acute local effects		Long-term systemic effects			Long-term local effects	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
8 mg/kg bw/day	50 mg/m3	8 mg/kg bw/day	n.a.	50 mg/m3	8 mg/kg bw/day	50 mg/m3	8 mg/kg bw/day	n.a.	50 mg/m3

Predicted No Effect Concentration

Triethoxy(octyl)silane

Compartment	**PNEC**
Fresh water	0.0058 mg/l
Marine water	0.00058 mg/l
Fresh water sediment	0.51 mg/kg
Marine sediment	0.051 mg/kg
Soil	0.08 mg/kg
Sewage treatment plant	>= 100 mg/l

methanol

Compartment	**PNEC**
Fresh water	20.8 mg/l
Marine water	2.08 mg/l
Intermittent use/release	1540 mg/l
Sewage treatment plant	100 mg/l
Fresh water sediment	77 mg/kg
Marine sediment	7.7 mg/kg
Soil	100 mg/kg

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit

requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent.

Skin protection

Hand protection: Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Polyvinyl chloride ("PVC" or "vinyl"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). When prolonged or frequently repeated contact may occur, a glove is recommended to prevent contact with the solid material. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from.

The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm.

Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In dusty or misty atmospheres, use an approved particulate respirator.

Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	coarse powder
Color	off-white
Odor	slight
Odor Threshold	no data available
pH	no data available
Melting point/range	no data available
Freezing point	no data available
Boiling point (760 mmHg)	no data available
Flash point:	**closed cup** > 100 °C
Evaporation rate (Butyl Acetate = 1)	no data available
Flammability (solid, gas)	Not classified as a flammability hazard
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapor pressure:	no data available
Relative Vapor Density (air = 1)	no data available
Relative Density (water = 1)	0.61
Water solubility:	no data available
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
Dynamic Viscosity	no data available
Kinematic Viscosity	no data available
Explosive properties	not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Other information	
Molecular weight	no data available
Particle size	no data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: Stability And Reactivity

Reactivity

Not classified as a reactivity hazard.

Chemical stability

Stable under normal conditions

Possibility of hazardous reactions

Can react with strong oxidizing agents. When heated to temperatures above 150 °C (300 °F) in the presence of air, product can form formaldehyde vapors. Safe handling conditions may be maintained by keeping vapor concentrations within the occupational exposure limit for formaldehyde.

Conditions to avoid

None known.

Incompatible materials

Oxidizing agents

Hazardous decomposition products

Formaldehyde. Ethanol. Benzene. Acrolein. Acetic acid.

SECTION 11:Toxicological Information

Information on toxicological effects

Acute toxicity

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):

LD50, Rat, > 5,000 mg/kg Estimated.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):

LD50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous. Dust may cause irritation to upper respiratory tract (nose and throat).

As product: The LC50 has not been determined.

Skin corrosion/irritation

Brief contact may cause slight skin irritation with local redness.

Prolonged contact may cause moderate skin irritation with local redness.

Serious eye damage/eye irritation

Solid or dust may cause irritation or corneal injury due to mechanical action.

Sensitization

Based on information for component(s):

For skin sensitization:

Did not cause allergic skin reactions when tested in humans.

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Contains component(s) which are classified as specific target organ toxicant, single exposure, category 1.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on information for component(s):
In animals, effects have been reported on the following organs:
Urinary tract.

Carcinogenicity

Based on information for component(s): Did not cause cancer in laboratory animals.

Teratogenicity

Based on information for component(s): Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity

No relevant data found.

Mutagenicity

Based on information for component(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Triethoxy(octyl)silane

Acute inhalation toxicity

LC50, Rat, male and female, 4 hrs, vapor, > 22 ppm No deaths occurred at this concentration.

methanol

Acute inhalation toxicity

Easily attainable vapor concentrations may cause serious adverse effects, even death. At lower concentrations: May cause respiratory irritation and central nervous system depression.
Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. Inhalation of methanol may cause effects ranging from headache, narcosis and visual impairment to metabolic acidosis, blindness, and even death. Effects may be delayed.
LC50, Rat, 4 Hour, vapor, 3 mg/l

SECTION 12: Ecological Effects

Toxicity

Triethoxy(octyl)silane

Acute toxicity to fish

Not expected to be acutely toxic to aquatic organisms.
No toxicity at the limit of solubility
LC50, Oncorhynchus mykiss (rainbow trout), flow-through, 96 hrs, > 0.055 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

No toxicity at the limit of solubility
EC50, Daphnia magna (Water flea), flow-through test, 48 hrs, > 0.049 mg/l, OECD Test

Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

No toxicity at the limit of solubility

ErC50, Pseudokirchneriella subcapitata (green algae), static test, 72 hrs, Growth rate inhibition, > 0.13 mg/l, OECD Test Guideline 201 or Equivalent

methanol

Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

LC50, Bluegill sunfish (Lepomis macrochirus), flow-through test, 96 Hour, 15,400 mg/l

Acute toxicity to aquatic invertebrates

LC50, Daphnia magna (Water flea), 48 Hour, > 10,000 mg/l

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate, 22,000 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

IC50, activated sludge, 3 Hour, Respiration rates., > 1,000 mg/l, OECD Test Guideline 209

Chronic toxicity to fish

NOEC, Oryzias latipes (Orange-red killifish), 200 Hour, 15,800 mg/l

Persistence and degradability

Triethoxy(octyl)silane

Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

10-day Window: Fail

Biodegradation: 31.5 %

Exposure time: 28 d

Method: OECD Test Guideline 301D or Equivalent

methanol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Bioaccumulative potential

Triethoxy(octyl)silane

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

Partition coefficient: n-octanol/water(log Pow): 6.41

methanol

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): -0.77 Measured

Bioconcentration factor (BCF): < 10 Leuciscus idus (Golden orfe) Measured

Mobility in soil

Triethoxy(octyl)silane

No relevant data found.

methanol

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 0.44 Estimated.

Results of PBT and vPvB assessment

Triethoxy(octyl)silane

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

methanol

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Other adverse effects

Triethoxy(octyl)silane

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

methanol

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13:Disposal considerations

Waste treatment methods

Do not dump into any sewers, on the ground, or into any body of water. This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

SECTION 14:Transport Information

Classification for ROAD and Rail transport (ADR/RID)

UN number	Not applicable
UN proper shipping name	Not regulated for transport
Transport hazard class(es)	Not applicable
Packing group	Not applicable
Environmental hazards	Not considered environmentally hazardous based on available data.
Special precautions for user	No data available.

Classification for SEA transport (IMO-IMDG):

UN number	Not applicable
UN proper shipping name	Not regulated for transport
Transport hazard class(es)	Not applicable
Packing group	Not applicable
Environmental hazards	Not considered as marine pollutant based on available data.
Special precautions for user	No data available.

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

UN number	Not applicable
UN proper shipping name	Not regulated for transport
Transport hazard class(es)	Not applicable
Packing group	Not applicable
Environmental hazards	Not applicable
Special precautions for user	No data available.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15:Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
REACh Regulation (EC) No 1907/2006

Polymers are exempted from registration under REACH. All relevant starting materials and additives have been either pre-registered, registered, or are exempt from registration to Regulation (EC) No. 1907/2006 (REACH).,The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer´s/user´s responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

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

Listed in Regulation: Not applicable

Chemical safety assessment

Not applicable

SECTION 16:Other Information

Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapor.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H331	Toxic if inhaled.
H370	Causes damage to organs if swallowed.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008

Skin Irrit. - 2	H315	Calculation method

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.