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

Product Identifier

Product Name: ADDSIL™ 13900

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

The product has not been classified as hazardous according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Label elements

Labelling according to Regulation (EC) No 1272/2008

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Supplemental label information:

EUH210: Safety data sheet available on request.

Additional Information:

No data available.

Other hazards

None

SECTION 3: Composition/information on ingredients

Chemical nature: Polyalkyleneoxidemethylsiloxane Copolymer

Mixture

General information: This product is a mixture.

Chemical name	CAS-No.	EC-No.	Concentration	M-Factor	Notes
Octamethylcyclotetrasiloxane	556-67-2	209-136-7	⩾0.1-1.0⩽	No data available.	PBT, vPvB
Decamethylpentasiloxane	541-02-6		⩾0.1-1.0⩽	No data available.	vPvB
Dodecamethylcyclohexasiloxane	540-97-6		⩾0.1-1.0⩽	No data	vPvB

				available.	

All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. This substance has workplace exposure limit(s). PBT: persistent, bioaccumulative and toxic substance. vPvB: very persistent and very bioaccumulative substance.

Classification

Chemical name	Classification	Notes
Octamethylcyclotetrasiloxane	Flam. Liq.: 3: H226; Repr.: 2: H361f; Aquatic Chronic: 2: H411;	No data available.
Decamethylpentasiloxane	No data available.	
Dodecamethylcyclohexasiloxane	No data available.	

CLP: Regulation No. 1272/2008

SECTION 4: First aid measures

General advice

Get medical attention if symptoms occur.

Description of first aid measures

If inhaled

Move into fresh air and keep at rest. Get medical attention if symptoms occur.

In case of skin contact

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if symptoms occur.

In case of eye contact

Get medical attention if symptoms occur. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

If swallowed

DO NOT induce vomiting. Get medical attention immediately. Do not give victim anything to drink if he is unconscious. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms and effects, both acute and delayed

None known.

Indication of any immediate medical attention and special treatment needed

Hazards: No information about adverse effects due to exposure.

Treatment: If swallowed, do NOT induce vomiting. Give a glass of water.

SECTION 5: Firefighting measures

General Fire Hazards:

Do not use water jet as an extinguisher, as this will spread the fire. Use water spray to keep fire-exposed containers cool.

Extinguishing media

Suitable extinguishing media

Alcohol resistant foam. Carbon dioxide Dry chemical.

Unsuitable extinguishing media

Avoid water in straight hose stream; will scatter and spread fire.

Special hazards arising from the substance or mixture:

In case of fire, carbon monoxide and carbon dioxide may be formed.

Advice for firefighters Special fire fighting procedures:

Take precautionary measures against static discharges. To prevent and minimize fire or explosion risk from static accumulation and discharge, effectively bond and/or ground product transfer system.

Special protective equipment for firefighters

Wear self-contained breathing apparatus and protective clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes, skin, and clothing. Avoid contact with liquid and vapors. Use personal protective equipment. Use only in well-ventilated areas.

Environmental precautions:

Do not allow runoff to sewer, waterway or ground.

Methods and materials for containment and cleaning up

Absorb spillage with suitable absorbent material. Shovel up and place in a container for salvage or disposal.

Reference to other sections:

Remove sources of ignition. In case of spills, beware of slippery floors and surfaces. See Section 8 of the SDS for Personal Protective Equipment. Collect and dispose of spillage as indicated in section 13 of the SDS.

SECTION 7: Handling and storage

Precautions for safe handling:

Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Wash hands after handling. Provide adequate ventilation. Avoid inhalation of dust and vapors.

Storage conditions：

Keep container tightly closed. Keep away from sources of ignition - No smoking. Do not allow material to freeze.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed. Keep away from sources of ignition - No smoking.

Storage Stability:

Material is stable under normal conditions.

Specific end use(s):

No data available.

SECTION 8: Exposure Controls/Personal Protection

Control parameters

Occupational exposure limits

Biological Limit Values:

None.

Exposure controls

Appropriate Engineering Controls:

Eyewash bottle with clean water. No special requirements under ordinary conditions of use and with adequate ventilation. Use only in well-ventilated areas.

Individual protection measures, such as personal protective equipment

General information:

Use only in well-ventilated areas. Do not eat, drink or smoke when using the product. Wash hands after handling. Practice good housekeeping.

Eye/face protection:

Safety glasses with side-shields conforming to EN166

Skin protection Hand protection:

Advice: There is no risk to health due to contact with the chemical. Use hand protection to prevent mechanically injuries.

Other:

Safety shoes Long sleeves

Respiratory Protection:

In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures:

Observe good industrial hygiene practices. Wash hands after handling. When using do not eat, drink or smoke. Provide adequate ventilation.

Environmental exposure controls:

No release to wastewater from process as such, wastewater emissions limited to release generated from final equipment cleaning step using water

SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	liquid
Color	colorless/yellow

Odor	polyether
Odor Threshold	no data available
pH	4.0～6.5 (1%　aqueous solution)
Melting point/range	no data available
Freezing point	no data available
Initial boiling point and boiling	no data available
Flash point:	113℃ GB/T 261-2008
Evaporation rate (Butyl Acetate = 1)	no data available
Flammability (solid, gas)	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapor pressure	no data available
Vapor density	heavier than air
Relative density	no data available
Density	(1.00～1.04)g/cm^3(25℃)
Water solubility:	Soluble
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Decomposition temperature	Material is stable under normal conditions.
Viscosity	(400～600) mPa.s/25℃
Explosive properties	no data available
Oxidizing properties	The substance or mixture is not classified as oxidizing.

SECTION 10: Stability And Reactivity

Reactivity

no data available

Chemical stability

Material is stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization does not occur.

Conditions to avoid

No specific data.

Incompatible materials

Inorganic halides. Strong oxidizing agents.

Hazardous decomposition Products：

Carbon oxides Oxides of silicon. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

SECTION 11:Toxicological Information

Information on likely routes of exposure

Inhalation:	no data available
Ingestion:	no data available
Skin Contact:	no data available
Eye contact:	no data available

Information on toxicological effects Acute toxicity

Oral

Product:	LD 50 (Rat): > 2.000 mg/kg (OECD-Guideline 401 (Acute Oral Toxicity))
Specified substance(s)	
Octamethylcyclotetrasiloxane:	LD 50 (Rat): 4.800 mg/kg
Decamethylpentasiloxane:	LD 50 (Rat): > 60.000 mg/kg
Dodecamethylcyclohexasiloxane:	LD 50 (Rat): 2.000 mg/kg

Dermal

Product:	LD 50 (Rat): > 2.000 mg/kg (OECD-Guideline 402 (Acute Dermal Toxicity)) Not classified
Specified substance(s)	
Octamethylcyclotetrasiloxane:	LD 50 (Rat): > 2.400 mg/kg
Decamethylpentasiloxane:	LD 50 (Rabbit): > 15.000 mg/kg
Dodecamethylcyclohexasiloxane:	LD 50 (Rat): 2.000 mg/kg

Inhalation

Product:	Not classified for acute toxicity based on available data.
Specified substance(s)	
Octamethylcyclotetrasiloxane:	LC50 (Rat, 4 h): 36 mg/l
Decamethylpentasiloxane:	No data available.
Dodecamethylcyclohexasiloxane:	No data available.

Repeated dose toxicity

Product:	No data available.
Specified substance(s)	
Octamethylcyclotetrasiloxane:	NOAEL (Rat(male and female), Inhalation – vapor(vapor)): 150 mg/kg (Rabbit(male and female), Dermal): 950 mg/kg
Decamethylpentasiloxane:	No data available.
Dodecamethylcyclohexasiloxane:	NOAEL (Rat(male and female), Oral): 1.000 mg/kg

Skin Corrosion/Irritation:

Product:

OECD-Guideline 404 (Acute Irritation/Corrosion) (Rabbit): No skin irritation: Dermal

Specified substance(s)
Octamethylcyclotetrasiloxane：
OECD-Guideline 404 (Acute Irritation/Corrosion) (Rat): No skin irritation: Dermal
Decamethylpentasiloxane：
No data available.
Dodecamethylcyclohexasiloxane：
OECD-Guideline 404 (Acute Irritation/Corrosion) (Rabbit, 72 h): No skin irritation: Dermal

Serious Eye Damage/Eye Irritation: No eye irritation

Product: No data available.

Specified substance(s)
Octamethylcyclotetrasiloxane：
OECD-Guideline 405 (Acute Eye Irritation/Corrosion) (Rabbit): Not irritating
Decamethylpentasiloxane：
(Rabbit): No eye irritation
Dodecamethylcyclohexasiloxane：
OECD-Guideline 405 (Acute Eye Irritation/Corrosion) (Rabbit, 72 h): No eye irritation Not irritating

Respiratory or Skin Sensitization:

Product:

Specified substance(s)
Octamethylcyclotetrasiloxane：
OECD-Guideline 406 (Skin Sensitization) (Guinea Pig) Not sensitizing
Decamethylpentasiloxane：
No data available.
Dodecamethylcyclohexasiloxane：
Maximisation Test, OECD-Guideline 406 (Skin Sensitisation) (Guinea Pig): negative

Germ Cell Mutagenicity

In vitro

Product:
Ames-Test (OECD-Guideline 471 (Genetic Toxicology: Salmonella typhimurium, Reverse Mutation Assay)): negative (not mutagenic)

Specified substance(s)
Octamethylcyclotetrasiloxane：
Ames-Test (OECD-Guideline 471 (Genetic Toxicology: Salmonella typhimurium, Reverse Mutation Assay)): negative (not mutagenic)
Mouse Lymphoma Assay (OECD Guidline 476): negative (not mutagenic)
Decamethylpentasiloxane：
No data available.
Dodecamethylcyclohexasiloxane：
Ames-Test (OECD-Guideline 471 (Genetic Toxicology: Salmonella typhimurium, Reverse Mutation

Assay)): negative

In vitro

Product:

No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane：

Chromosomal aberration (OECD-Guideline 474 (Genetic Toxicology: Micronucleus Test)) Inhalation (Rat, male and female): negative

Dominant lethal assay (OECD 478) Oral (Rat, male and female): negative

Decamethylpentasiloxane：

No data available.

Dodecamethylcyclohexasiloxane：

OECD-Guideline 474 (Genetic Toxicology: Micronucleus Test) (OECD-Guideline 474 (Genetic Toxicology: Micronucleus Test)) Intraperitoneal (Mouse, male and female): negative

Carcinogenicity

Product: No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane： No data available.

Decamethylpentasiloxane： No data available.

Dodecamethylcyclohexasiloxane： No data available.

Reproductive toxicity

Product: No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane： No data available.

Decamethylpentasiloxane： No data available.

Dodecamethylcyclohexasiloxane： No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Octamethylcyclotetrasiloxane： No data available.

Decamethylpentasiloxane： No data available.

Dodecamethylcyclohexasiloxane： No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane： No data available.

Decamethylpentasiloxane： No data available.

Dodecamethylcyclohexasiloxane： No data available.

Aspiration Hazard

Product: No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane: No data available.

Decamethylpentasiloxane: No data available.

Dodecamethylcyclohexasiloxane: No data available.

Other effects:

Octamethylcyclotetrasiloxane (D4) Ingestion: Rodents given large doses via oral gavage of Octamethylcyclotetrasiloxane (1600mg/kg/day,14 days), developed increased liver weights relative to unexposed control animals due to hepatocellular hyperplasia (increased number of liver cells which appear normal) as well as hypertrophy (increased cell size). Inhalation: In inhalation studies, laboratory rodents exposed to Octamethylcyclotetrasiloxane (300 ppm five days/week, 90 days) developed increased liver weights in female animals relative to unexposed control animals. When the exposure was stopped, liver weights returned to normal. Microscopic examination of the liver cells did not show any evidence of pathology. This response in rats, which does not affect the animal's health, is well-documented and widely recognized. It is related to an increase of liver enzymes that metabolize and eliminate a material from the body. The increased liver weight reverses even while the D4 exposure continues. The finding is not adverse, but is considered a natural adaptive change in rats, and does not represent a hazard to humans. Inhalation studies utilizing laboratory rabbits and guinea pigs showed no effects on liver weights. Inhalation exposures typical of industrial usage (5-10 ppm) showed no toxic effects in rodents. Range finding reproductive studies were conducted (whole body inhalation, 70 days prior to mating, through mating, gestation and lactation), with D4. Rats were exposed to 70 and 700 ppm. In the 700 ppm group, there was a statistically significant reduction in mean litter size and in implantation sites. No D4 related clinical signs were observed in the pups and no exposure related pathological findings were found. A two-year, combined chronic/carcinogenicity study, during which rats were exposed to D4 by inhalation, data showed a statistically significant increase in a benign uterine tumor in female rats exposed at the highest level—a level much higher than the low levels that consumers or workers may encounter. An expert panel of independent scientists who have reviewed the results of this research concur that the finding seen in the two-year study occurred through a biological pathway that is specific to the rat and is not relevant to humans. Therefore, this observed effect does not indicate a potential health hazard to humans. In developmental toxicity studies, rats and rabbits were exposed to D4 at concentrations up to 700 ppm and 500 ppm, respectively. No teratogenic effects (birth defects) were observed in either study.

SECTION 12: Ecological Effects

Toxicity

Acute toxicity

Fish

Product: No data available

Specified substance(s)

Octamethylcyclotetrasiloxane:	No data available.
Decamethylpentasiloxane:	(Oncorhynchus mykiss, 14 d): > 16 mg/l NOEC (Oncorhynchus mykiss, 14 d): 16 mg/l
Dodecamethylcyclohexasiloxane:	No data available.
Aquatic Invertebrates	
Product:	No data available.
Specified substance(s)	
Octamethylcyclotetrasiloxane:	No data available
Decamethylpentasiloxane:	No data available
Dodecamethylcyclohexasiloxane:	No data available
Chronic Toxicity	
Fish	
Product:	No data available.
Octamethylcyclotetrasiloxane:	No data available.
Decamethylpentasiloxane:	No data available.
Dodecamethylcyclohexasiloxane:	NOEC (Pimephales promelas, 49 d): 0,0044 mg/l
Aquatic Invertebrates	
Product:	No data available.
Specified substance(s)	
Octamethylcyclotetrasiloxane:	No data available.
Decamethylpentasiloxane:	No data available.
Dodecamethylcyclohexasiloxane:	NOEC (Daphnia magna, 21 d): 0,0046 mg/l EC50 (Sediment Invertebrate, 28 d): > 420 mg/l LOEC (Sediment Invertebrate, 28 d): >= 420 mg/l
Toxicity to Aquatic Plants	
Product:	No data available.
Specified substance(s)	
Octamethylcyclotetrasiloxane:	No data available.
Decamethylpentasiloxane:	No data available.
Dodecamethylcyclohexasiloxane:	EC50 (Algae (Pseudokirchneriella subcapitata), 72 h): > 0,002 mg/l (OECD Test Guideline 201) NOEC (Algae (Pseudokirchneriella subcapitata), 72 h): >= 0,002 mg/l (OECD Test Guideline 201)
Persistence and Degradability	
Biodegradation	
Product:	No data available.
Specified substance(s)	
Octamethylcyclotetrasiloxane:	(29 d, 310 Ready Biodegradability - CO_2 in Sealed Vessels (Headspace Test)): 3,7 % Persistent Not readily

biodegradable.

Decamethylpentasiloxane: No data available.

Dodecamethylcyclohexasiloxane: No data available.

BOD/COD Ratio

Product No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane: No data available.

Decamethylpentasiloxane: No data available.

Dodecamethylcyclohexasiloxane: No data available.

Bioaccumulative potential

Product: No data available.

Specified substance(s)

Octamethylcyclotetrasiloxane: Fathead Minnow, Bioconcentration Factor (BCF): 12,40

Decamethylpentasiloxane: No data available.

Dodecamethylcyclohexasiloxane: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Octamethylcyclotetrasiloxane: No data available.

Decamethylpentasiloxane: No data available.

Dodecamethylcyclohexasiloxane: No data available.

Results of PBT and vPvB assessment:

Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB)

Octamethylcyclotetrasiloxane

Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB)

Octamethylcyclotetrasiloxa ne (D4) meets the current EU REACh Annex XIII criteria for PBT and vPvB and has been added to the candidate list for Substances of very high concern (SVHC). However, D4 does not behave similarly to known PBT/vPvB substances. The silicones industries interpretation of the available data is that the weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by naturally occurring reactions in the atmosphere. Any D4 in air that does not degrade by these reactions is not expected to deposit from the air to water, to land, or to living organisms.

Decamethylpentasiloxane

vPvB: very persistent and very bioaccumulative substance.

Decamethylcyclopentasilox ane (D5) meets the current EU REACH Annex XIII criteria for vPvB and has been added to the candidate list for Substances of very high concern (SVHC). However, D5 does not behave similarly to known PBT/vPvB substances. The silicones industries interpretation of the available data is that the weight of scientific evidence from field studies shows that D5 is not biomagnifying in aquatic and terrestrial food webs. D5 in air will degrade by naturally occurring reactions in the atmosphere. Any D5 in air that does not degrade by these reactions is not expected to deposit from the air to water, to

land, or to living organisms.

Dodecamethylcyclohexasiloxane

vPvB: very persistent and very bioaccumulative substance.

Dodecamethylcyclohexasil oxane (D6) meets the current EU REACH Annex XIII criteria for vPvB and has been added to the candidate list for Substances of very high concern (SVHC). However, D6 does not behave similarly to known PBT/vPvB substances. The silicones industries interpretation of the available data is that the weight of scientific evidence from field studies shows that D6 is not biomagnifying in aquatic and terrestrial food webs. D6 in air will degrade by naturally occurring reactions in the atmosphere. Any D6 in air that does not degrade by these reactions is not expected to deposit from the air to water, to land, or to living organisms

Other adverse effects: No data available.

SECTION 13:Disposal considerations

Waste treatment methods

General information: No data available.

Disposal methods: Can be incinerated when in compliance with local regulations.

SECTION 14:Transport Information

ADR: Not regulated.

AND: Not regulated.

RID: Not regulated.

IMDG: Not regulated.

IATA: Not regulated.

Special precautions for user:

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

Keep away from foodstuffs and animal feed.

Transport in bulk according to Annex II of MARPOL and the IBC Code:

Not applicable

Special precautions for user：

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

Keep away from foodstuffs and animal feed.

SECTION 15:Regulatory Information

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

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer: none

Regulation (EC) No. 850/2004 on persistent organic pollutants: none

Regulation (EC) No. 649/2012 Import and export of dangerous chemicals: none

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended: none

EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC):

Chemical name	CAS-No.	Concentration
Octamethylcyclotetrasiloxane	556-67-2	0 - <=0.88%
Decamethylpentasiloxane	541-02-6	0 - <=0.54%

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:

Chemical name	CAS-No.	Concentration
Chemical name	CAS-No.	Concentration

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work. none

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding. none

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants: none

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
Octamethylcyclotetrasiloxane	556-67-2	0.1 – 1.0%

Chemical safety assessment:

No Chemical Safety Assessment has been carried out.

Inventory Status

Australia AICS:

On or in compliance with the inventory

Remarks: None.

Canada DSL Inventory List:

On or in compliance with the inventory

Remarks: None.

EINECS, ELINCS or NLP:

On or in compliance with the inventory

Remarks: None.

Japan (ENCS) List:

On or in compliance with the inventory

Remarks: None.

China Inv. Existing Chemical Substances:

On or in compliance with the inventory

Remarks: None.
Korea Existing Chemicals Inv. (KECI):
On or in compliance with the inventory
Remarks: None.
Canada NDSL Inventory:
Not in compliance with the inventory.
Remarks: None.
Philippines PICCS:
On or in compliance with the inventory
Remarks: None.
US TSCA Inventory:
On or in compliance with the inventory
Remarks: None.
New Zealand Inventory of Chemicals:
On or in compliance with the inventory
Remarks: None.
Taiwan Chemical Substance Inventory:
On or in compliance with the inventory
Remarks: None.

SECTION 16:Other Information

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.