



Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: CYCLOPENTASILOXANE

Item No.: Silibase-CM5

Chemical nature: Silicone

Supplier Information:

Company Name: SILIBASE SILICONE

Address: Room 1401, Peninsula International Mansion, Jiande City, 311600, Zhejiang Province, China

Tel.: 0086 571 6453 7063

Fax: 0086 571 6453 7093

Website: www.silicone-surfactant.com

Email: sales@silicone-surfactant.com

Recommended use of the chemical and restrictions on use

Recommended use: Cosmetics Solvent

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid

Colour: colourless

Odour: none

Combustible liquid.

GHS Classification

Flammable liquids: Category 4

GHS Label element

Hazard pictograms: None

Signal word: Warning

Hazard statements: H227 Combustible liquid

Precautionary statements:

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces.

No smoking.

P261 Avoid breathing spray

P271 Use only outdoors or in a well-ventilated area.

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

Storage:

P403+P235 Store in a well-ventilated place. Keep cool.

Disposal:

Material Safety Data Sheet

P501 Dispose of contents/ container to an approved waste disposal plant.

Physical and chemical hazards

Combustible liquid.

Health hazards

Not classified based on available information.

Environmental hazards

Not classified based on available information.

Other hazards which do not result in classification

Vapours may form explosive mixture with air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Substance

Hazardous components

Chemical Name	CAS No.	Concentration (%)
Decamethylcyclopentasiloxane	541-02-6	>= 99 - <= 100

4. FIRST AID MEASURES

If inhaled:

If inhaled, remove to fresh air.

Get medical attention if symptoms occur.

In case of skin contact:

Wash with water and soap as a precaution.

Get medical attention if symptoms occur.

In case of eye contact:

Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed:

If swallowed, DO NOT induce vomiting.

Get medical attention if symptoms occur.

Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed

None known.

Protection of first-aiders:

No special precautions are necessary for first aid responders.

Notes to physician:

Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Material Safety Data Sheet

Suitable extinguishing media:

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

Unsuitable extinguishing media:

High volume water jet

Specific hazards during fire- fighting:

Do not use a solid water stream as it may scatter and spread fire.
Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.
Fire burns more vigorously than would be expected.
Exposure to combustion products may be a hazard to health.

Hazardous combustion products:

Carbon oxides
Silicon oxides
Formaldehyde

Specific extinguishing methods:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

Special protective equipment for firefighters:

Wear self-contained breathing apparatus for firefighting if necessary.
Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition.
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:

Non-sparking tools should be used.
Soak up with inert absorbent material.

Material Safety Data Sheet

Suppress (knock down) gases/vapours/mists with a water spray jet.

For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.

Clean up remaining materials from spill with suitable absorbent.

Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur.

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.

7. HANDLING AND STORAGE

Handling

Technical measures:

See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation:

Use with local exhaust ventilation.

Use only in an area equipped with explosion proof exhaust ventilation.

Advice on safe handling:

Avoid inhalation of vapour or mist.

Handle in accordance with good industrial hygiene and safety practice.

Keep container tightly closed.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges.

Take care to prevent spills, waste and minimize release to the environment.

Avoidance of contact:

Oxidizing agents

Storage

Conditions for safe storage:

Keep in properly labelled containers.

Keep tightly closed.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.

Keep away from heat and sources of ignition.

Materials to avoid:

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

Packaging material:

Unsuitable material: None known.

Material Safety Data Sheet

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters:

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Decamethylcyclopentasiloxane	541-02-6	TWA	10 ppm	DCC OEL

Engineering measures:

Processing may form hazardous compounds (see section 10).

Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Use only in an area equipped with explosion proof exhaust ventilation.

Personal protective equipment

Respiratory protection:

Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type: Organic vapour type

Eye/face protection: Wear the following personal protective equipment: Safety glasses

Skin and body protection:

Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.

Wear the following personal protective equipment: Flame retardant antistatic protective clothing.

Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hand protection Material: Flame retardant gloves

Remarks:

Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Wash hands before breaks and at the end of workday.

Hygiene measures:

Ensure that eye flushing systems and safety showers are located close to the working place.

When using do not eat, drink or smoke.

Wash contaminated clothing before re-use.

These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

For further information regarding the use of silicones / organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry

Material Safety Data Sheet

or contact the SILIBASE SILICONE customer service group.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid

Colour: colourless

Odour: none

Odour Threshold: No data available

PH: No data available

Melting point/freezing point: No data available

Initial boiling point and boiling range: 211 °C

Flash point: 77 °C

Method: Tag closed cup

Evaporation rate: <1

Flammability (solid, gas): Not applicable

Upper explosion limit: 13.21 %(V)

Lower explosion limit: 0.45 %(V)

Vapour pressure: 0.15 hPa

Relative vapour density: No data available

Relative density: 0.955

Solubility(ies)

Water solubility: No data available

Partition coefficient: noctanol/water: No data available

Auto-ignition temperature: 392 °C

Decomposition temperature: No data available

Viscosity

Viscosity, kinematic: 4.0mm²/s

Explosive properties: Not explosive

Oxidizing properties: The substance or mixture is not classified as oxidizing.

Molecular weight: No data available

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions:

Combustible liquid.

Vapours may form explosive mixture with air.

Use at elevated temperatures may form highly hazardous compounds.

Can react with strong oxidizing agents.

Hazardous decomposition products will be formed at elevated temperatures.

Conditions to avoid: Heat, flames and sparks.

Material Safety Data Sheet

Incompatible materials: Oxidizing agents

Hazardous decomposition products

Thermal decomposition: Formaldehyde

11. TOXICOLOGICAL INFORMATION

Exposure routes:

Inhalation

Skin contact

Ingestion

Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute inhalation toxicity:

LC50 (Rat): 8.67 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation toxicity

Remarks: Based on test data

Components:

Decamethylcyclopentasiloxane:

Acute oral toxicity:

LD50 (Rat): > 24,134 mg/kg

Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity:

LC50 (Rat): 8.67 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation toxicity

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information. Respiratory sensitisation:

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Product:

Genotoxicity in vitro:

Material Safety Data Sheet

Test Type: Bacterial reverse mutation assay (AMES) Result: negative

Remarks: Based on test data

Genotoxicity in vivo:

Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo

Species: Rat

Application Route: inhalation (vapour)

Result: negative

Remarks: Based on test data

Germ cell mutagenicity Assessment:

Animal testing did not show any mutagenic effects.

Components:

Decamethylcyclopentasiloxane:

Genotoxicity in vitro:

Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on test data

Genotoxicity in vivo:

Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo

Species: Rat

Application Route: inhalation (vapour)

Result: negative

Remarks: Based on test data

Germ cell mutagenicity Assessment:

Animal testing did not show any mutagenic effects.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

Product:

Effects on fertility:

Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Inhalation

Symptoms: No effects on fertility

Remarks: Based on test data

Effects on foetal development:

Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Inhalation

Symptoms: No effects on foetal development

Remarks: Based on test data

Material Safety Data Sheet

Reproductive toxicity – Assessment:

No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Components:

Decamethylcyclopentasiloxane:

Effects on fertility:

Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Inhalation

Symptoms: No effects on fertility

Remarks: Based on test data

Effects on foetal development:

Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Inhalation

Symptoms: No effects on foetal development

Remarks: Based on test data

Reproductive toxicity – Assessment:

No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Product:

Exposure routes: Ingestion

Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg below or less.

Exposure routes: Skin contact

Assessment: No significant health effects observed in animals at concentrations of 200 mg/kg bw or less.

Exposure routes: inhalation (vapour)

Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

Components:

Decamethylcyclopentasiloxane:

Exposure routes: Skin contact

Assessment: No significant health effects observed in animals at concentrations of 200 mg/kg bw or less.

Exposure routes: Ingestion

Assessment: No significant health effects observed in animals at concentrations of 100

Material Safety Data Sheet

mg/kg bw or less.

Exposure routes: inhalation (vapour)

Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d orless.

Repeated dose toxicity

Product:

Species: Rat

Application Route: Ingestion

Remarks: Based on test data

Species: Rat

Application Route: Skin contact

Remarks: Based on test data

Species: Rat

Application Route: inhalation (vapour) Remarks: Based on test data

Components:

Decamethylcyclopentasiloxane:

Species: Rat

Application Route: Skin contact

Remarks: Based on test data

Species: Rat

Application Route: Ingestion

Remarks: Based on test data

Species: Rat

Application Route: inhalation (vapour)

Remarks: Based on test data

Aspiration toxicity

Not classified based on available information.

Further information

Components:

Decamethylcyclopentasiloxane:

Remarks: Results from a 2 year repeated vapour inhalation exposure study to rats of decamethylcyclopentasiloxane (D5) indicate effects (uterine endometrial tumors) in female animals. This finding occurred at the highest exposure dose (160 ppm) only. Studies to date have not demonstrated if this effect occurs through a pathway that is relevant to humans. Based on the available information on its potential to cause harm to human health, Health Canada, in a 2008 screening assessment, has concluded that D5 is not entering the environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health.

12. ECOLOGICAL INFORMATION

Material Safety Data Sheet

Ecotoxicity

Components:

Decamethylcyclopentasiloxane:

Toxicity to fish (Chronic toxicity): Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): Remarks: No toxicity at the limit of solubility

Ecotoxicology Assessment Chronic aquatic toxicity: This product has no known ecotoxicological effects.

Persistence and degradability

Components:

Decamethylcyclopentasiloxane:

Biodegradability:

Result: Not readily biodegradable.

Biodegradation: 0.14 % Exposure time: 28 d

Method: OECD Test Guideline 310

Bioaccumulative potential

Components:

Decamethylcyclopentasiloxane:

Bioaccumulation:

Species: Pimephales promelas (fathead minnow)

Bioconcentration factor (BCF): ≥ 500

Remarks: Based on test data

Trophic magnification factor < 1

Biomagnification factor < 1

Does not biomagnify along the food chain.

Mobility in soil

No data available

Other adverse effects

Components:

Decamethylcyclopentasiloxane:

Results of PBT and vPvB assessment

Remarks: Decamethylcyclopentasiloxane (D5) meets the current REACH Annex XIII criteria for vPvB. However, D5 does not behave similarly to known PBT/vPvB substances. 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 reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D5 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms. Based on an independent scientific panel of experts, the Canadian Minister of the Environment has concluded that "D5 is not entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long term harmful effect on the environment or its biological diversity, or that constitute or may

Material Safety Data Sheet

constitute a danger to the environment on which life depends".

13. DISPOSAL CONSIDERATIONS

Disposal methods:

Waste from residues: Dispose of in accordance with local regulations.

Contaminated packaging:

Dispose of as unused product.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION

International Regulation

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

National Regulations

GB 6944/12268

Not regulated as a dangerous good

15. REGULATORY INFORMATION

National regulatory information

Law on Prevention and Control of Environment Pollution by Solid Waste Regulation on the Safety Management of Hazardous Chemicals Provisions on the Safe Use of Chemicals at Workplace

Rules for Classification and Labelling of Chemicals (GB 30000) Law on the Prevention and Control of Occupational Diseases

Fire Protection Law

The components of this product are reported in the following inventories:

NZIoC: All ingredients listed or exempt.

REACH: All ingredients (pre-)registered or exempt.

TSCA: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

PICCS: All ingredients listed or exempt.

Material Safety Data Sheet

KECI: All ingredients listed, exempt or notified.

AICS: All ingredients listed or exempt.

IECSC: All ingredients listed or exempt.

ENCS/ISHL: All components are listed on ENCS/ISHL or exempted from inventory listing.

DSL: All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), NECSI (Taiwan), TSCA (USA)

16. OTHER INFORMATION

Further information

Sources of key data used to compile the Safety Data Sheet:

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Date format: yyyy/mm/dd

Full text of other abbreviations

DCC OEL: SILIBASE SILICONE Guide

DCC OEL / TWA: Time weighted average

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

CN / EN