1. Identification

Product identifier
SilOil, M90.055/170.02

Substance name: Dodecamethylpentasiloxane
CAS No: 141-63-9

Recommended use of the chemical and restrictions on use

Use of the substance/mixture
Heat transfer oil / cold transfer oil

Uses advised against
Any non-intended use.

Details of the supplier of the safety data sheet

Company name: Huber USA Inc.
Street: 1101 Nowell Rd Suite 110
Place: USA-NC 27607 Raleigh
Telephone: 800-726-4877
E-mail: info@huber-online.com
Internet: www.huber-usa.com

Emergency phone number: Toll Free: 1-800-424-9300; Local: +1-703-527-3887

2. Hazard(s) identification

Classification of the chemical
29 CFR Part 1910.1200
This substance is not classified as hazardous in accordance with Regulation 29 CFR 1910.1200(d).

Label elements

Additional advice on labelling
Label elements GHS: None

Hazards not otherwise classified
No risks worthy of mention. Please observe the information on the safety data sheet at all times.

3. Composition/information on ingredients

Substances

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Components</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>141-63-9</td>
<td>Dodecamethylpentasiloxane</td>
<td>95 - 100%</td>
</tr>
</tbody>
</table>

4. First-aid measures

Description of first aid measures

General information
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation
In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

After contact with skin
Gently wash with plenty of soap and water. Remove contaminated clothing immediately. In case of skin
irritation consult a doctor.

**After contact with eyes**
Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. In case of troubles or persistent symptoms, consult an ophthalmologist.

**After ingestion**
Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

**Most important symptoms and effects, both acute and delayed**
See sections 2 and 11

**Indication of any immediate medical attention and special treatment needed**
Treat symptomatically.

### 5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media**

**Unsuitable extinguishing media**
- High power water jet.

**Specific hazards arising from the chemical**
- Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO2). Silicon dioxide (SiO2).

**Special protective equipment and precautions for fire-fighters**
- In case of fire: Wear self-contained breathing apparatus. Wear chemical resistant suit.

**Additional information**
- Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
- Co-ordinate fire-fighting measures to the fire surroundings.

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**General advice**
- See protective measures under point 7 and 8.

**For non-emergency personnel**
- Wear personal protection equipment (refer to section 8).

**For emergency responders**
- No special measures are necessary.

**Environmental precautions**
- Discharge into the environment must be avoided. Prevent spread over a wide area (e.g. by containment or oil barriers).

**Methods and material for containment and cleaning up**

**For containment**
- Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
- Treat the recovered material as prescribed in the section on waste disposal.

**For cleaning up**
- Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections**
- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

### 7. Handling and storage
Precautions for safe handling

Advice on safe handling
Wear suitable protective clothing. (See section 8.)

Advice on protection against fire and explosion
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharge. Usual measures for fire prevention.

Advice on general occupational hygiene
Always close containers tightly after the removal of product. When using do not eat, drink or smoke. Wash hands before breaks and after work. Avoid contact with skin, eyes and clothes. Take off immediately all contaminated clothing.

Further information on handling
General protection and hygiene measures: See section 8. Vapors / aerosols must be extracted by suction immediately at point of origin.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep container tightly closed in a cool, well-ventilated place.

Hints on joint storage

Further information on storage conditions
Keep the packing dry and well sealed to prevent contamination and absorbtion of humidity. Recommended storage temperature: 20 °C Protect against: frost. UV-radiation/sunlight. heat. Humidity

8. Exposure controls/personal protection

Control parameters

Additional advice on limit values
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Exposure controls

Appropriate engineering controls
Technical measures and the application of suitable work processes have priority over personal protection equipment. Provide adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear safety glasses; chemical goggles (if splashing is possible). Standards: EN 166 or 29 CFR 1910.133

Hand protection
In case of prolonged or frequently repeated skin contact:
Wear suitable gloves.
Suitable material:
FKM (fluororubber). - Thickness of the glove material 0,4 mm
Breakthrough time >= 8 h
Butyl rubber. - Thickness of the glove material 0,5 mm
Breakthrough time >= 8 h
CR (polychloroprenes, Chloroprene rubber). - Thickness of the glove material 0,5 mm
Breakthrough time >= 8 h
NBR (Nitrile rubber). - Thickness of the glove material 0,35 mm
Breakthrough time >= 8 h
PVC (Polyvinyl chloride). - Thickness of the glove material 0,5 mm
Breakthrough time >= 8 h
The selected protective gloves should satisfy the specifications of standards like EN 374.
Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

**Skin protection**
Suitable protective clothing: Lab apron.

**Respiratory protection**
With correct and proper use, and under normal conditions, breathing protection is not required.
Respiratory protection necessary at:
Exceeding exposure limit values
Suitable respiratory protective equipment: half-mask with filter EN 149 or 29 CFR 1910.134.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

**Environmental exposure controls**
No special precautionary measures are necessary.

### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state: liquid</td>
</tr>
<tr>
<td>Color: colourless</td>
</tr>
<tr>
<td>Odor: odourless</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>not determined</td>
</tr>
<tr>
<td>not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Melting point/freezing point:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling point or initial boiling point and boiling range:</td>
</tr>
<tr>
<td>Lower explosion limits:</td>
</tr>
<tr>
<td>Upper explosion limits:</td>
</tr>
<tr>
<td>Flash point:</td>
</tr>
<tr>
<td>Auto-ignition temperature:</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
</tr>
<tr>
<td>pH-Value:</td>
</tr>
<tr>
<td>Viscosity / kinematic:</td>
</tr>
<tr>
<td>Water solubility:</td>
</tr>
<tr>
<td>Solubility in other solvents:</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water:</td>
</tr>
<tr>
<td>Vapor pressure:</td>
</tr>
<tr>
<td>Density (at 25 °C):</td>
</tr>
<tr>
<td>Relative vapour density:</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>not determined</th>
<th>ISO 2592</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
<td>not determined</td>
</tr>
<tr>
<td>ca. 2 mm²/s</td>
<td>insoluble</td>
</tr>
<tr>
<td>ca. 0.87 g/cm³</td>
<td>not determined</td>
</tr>
</tbody>
</table>

**Other information**

**Information with regard to physical hazard classes**
Explosive properties
- none

Sustaining combustion: Not sustaining combustion
Self-ignition temperature
- Gas: not determined

Oxidizing properties
- none
Other safety characteristics

Evaporation rate: not determined
Solvent separation test: not determined
Solvent content: not determined
Solid content: not determined
Sublimation point: not determined
Softening point: not determined
Pour point: not determined
Viscosity / dynamic: not determined
Flow time: not determined

10. Stability and reactivity

Reactivity
No hazardous reactions known.

Chemical stability
Stability: Stable
The product is chemically stable under recommended conditions of storage, use and temperature.

Possibility of hazardous reactions
Hazardous reactions: Will not occur
Refer to chapter 10.5.

Conditions to avoid
UV-radiation/sunlight, heat. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharges.

Incompatible materials
Materials to avoid: Oxidizing agents, strong.

Hazardous decomposition products
Can be released in case of fire: Carbon monoxide (CO), Carbon dioxide (CO2), Silicon dioxide (SiO2)
Measurements have shown that at temperatures above approx. 150 °C a small amount of formaldehyde is split off by oxidative decomposition.

11. Toxicological information

Route(s) of Entry
Ingestion: May be harmful if swallowed. Inhalation: May be harmful if inhaled. Skin contact: May cause irritation. Eye contact: May cause irritation.

Information on toxicological effects
Toxicokinetics, metabolism and distribution
No data available.

Acute toxicity
Based on available data, the classification criteria are not met.

**Acute oral toxicity**
- Parameter: LD50
- Exposure route: dermal
- Species: Rat
- Effective dose: > 2000 mg/kg
- By analogy.

**Acute dermal toxicity**
- Parameter: LD50
- Exposure route: oral
- Species: Rat
- Effective dose: > 5000 mg/kg
- By analogy.

**Acute inhalation toxicity**
The product has not been tested.

**Irritation and corrosivity**
Based on available data, the classification criteria are not met.

**Sensitizing effects**
Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**
Based on available data, the classification criteria are not met.

**Specific target organ toxicity (STOT) - single exposure**
Based on available data, the classification criteria are not met.

**Specific target organ toxicity (STOT) - repeated exposure**
Based on available data, the classification criteria are not met.

**Carcinogenicity (OSHA):** Not listed.
**Carcinogenicity (IARC):** Not listed.
**Carcinogenicity (NTP):** Not listed.

**Aspiration hazard**
Based on available data, the classification criteria are not met.

**Specific effects in experiment on an animal**
No data available.

**Information on other hazards**

**Endocrine disrupting properties**
No data available.

### 12. Ecological information

**Ecotoxicity**
The product has not been tested.

**Persistence and degradability**
The product has not been tested.

**Bioaccumulative potential**
No indication of bioaccumulation potential.

**Mobility in soil**
No data available.

**Endocrine disrupting properties**
This substance does not have endocrine disrupting properties with respect to non-target organisms. The aforementioned statement applies to substances contained in the product with a minimum content of 0.1%.

**Other adverse effects**

No data available.

**Further information**

Do not allow to enter into surface water or drains.

### 13. Disposal considerations

**Waste treatment methods**

**Disposal recommendations**

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled.

**RCRA Hazardous wastes (Resource Conservation and Recovery Act)**

None

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

### 14. Transport information

**U.S. DOT 49 CFR 172.101**

**Proper shipping name:**

Not a hazardous material with respect to these transport regulations. 

Not controlled under DOT

**Marine transport (IMDG)**

**UN number or ID number:**

No dangerous good in sense of this transport regulation.

**UN proper shipping name:**

No dangerous good in sense of this transport regulation.

**Transport hazard class(es):**

No dangerous good in sense of this transport regulation.

**Packing group:**

No dangerous good in sense of this transport regulation.

**Air transport (ICAO-TI/IATA-DGR)**

**UN number or ID number:**

No dangerous good in sense of this transport regulation.

**UN proper shipping name:**

No dangerous good in sense of this transport regulation.

**Transport hazard class(es):**

No dangerous good in sense of this transport regulation.

**Packing group:**

No dangerous good in sense of this transport regulation.

**Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**Special precautions for user**

refer to chapter 6 - 8

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

not relevant

### 15. Regulatory information

**U.S. Regulations**

**National Inventory TSCA**

Dodecamethylpentasiloxane listed in the TSCA inventory 8 (b): (x) active,

Dodecamethylpentasiloxane not listed under TSCA 12(b)

**State Regulations**

**Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)**

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
This mixture is classified as not hazardous according to Regulation 29 CFR Part 1910.1200.

16. Other information

Hazardous Materials Identification System (HMIS)
- Health: 0
- Flammability: 1
- Physical Hazard: 0
- Personal Protection: -

NFPA Hazard Ratings
- Health: 0
- Flammability: 1
- Reactivity: 0
- Unique Hazard: -

Changes
- Revision date: 07/21/2023
- Revision No: 3.0
- Rev. 1.0; Initial release: 25.09.2020
- Rev. 2.0; 28.07.2022, Changes in chapter: 2-16
- Rev. 3.0; 21.07.2023, Revision

Abbreviations and acronyms
- ACGIH: American Conference of Governmental Industrial Hygienists
- ATE: acute toxicity estimate
- BCF: Bio concentration factor
- ECHA: European Chemicals Agency
- CAS: Chemical Abstracts Service
- CFR: Code of Federal Regulations
- DOT: Department of Transportation
- d: days
- EC50: Half maximal effective concentration
- EN: European Norm
- EPA: Environmental Protection Agency
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- h: hours
- HMIS: Hazardous Materials Identification System
- IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
- IBC: Intermediate Bulk Container
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
- ICAO: International Civil Aviation Organization
- ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- LOAEL: Lowest observed adverse effect level
- LOAEC: Lowest observed adverse effect concentration
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- MARPOL: marine pollution
- NOAEL: No observed adverse effect level
- NOAEC: No observed adverse effect concentration
- NTP: National Toxicology Program
- N/A: not applicable
Classification according 29 CFR Part 1910.1200:

- Classification procedure:
  Health hazards: Calculation method.
  Environmental hazards: Calculation method.
  Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.