

SAFETY DATA SHEET

PSF-2cSt Silicone Heat Transfer Fluid

Data Prepared: March 5th, 2019



1. Product and company identification

Product Name: PSF-2cSt Silicone Heat Transfer Fluid
Material Uses: Industrial applications: Manufacture of cosmetics, Manufacture of personal care products.

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This Material Safety Data Sheet conforms to the requirements of ANSI Z400.1.

2. Hazards identification

OSHA/HCS Status : This material is considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200).
Classification of the substance or mixture : FLAMMABLE LIQUIDS-Category 4

GHS Label elements

Hazard pictograms



Signal Word :Warning
Hazard Statements:H227 Combustible liquid

Precautionary Statements:

Prevention : P280-Wear protective gloves. Wear eye or face protection
P210- Keep away from heat, hot surfaces, sparks, open flames and other ignition

Response : Not applicable
Storage :P403 Store in a well-ventilated place.
P235- Keep cool.

Disposal : P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known

See toxicological information (Section 11)

3. Composition/information on ingredients

Substance/mixture: Substance

Ingredient name	%	CAS number
Dodecamethylpentasiloxane	60-100	141-63-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Additional information

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention immediately.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : Remove dentures if any. Wash out mouth with water. Stop if the exposed person feels sick as vomiting may be dangerous. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards
- Inhalation** : No known significant effects or critical hazards
- Skin contact** : No known significant effects or critical hazards
- Ingestion** : No known significant effects or critical hazards

Over-exposure signs/symptoms

- Eye contact** : No specific data
- Inhalation** : No specific data
- Skin contact** : No specific data
- Ingestion** : No specific data

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operating in positive pressure mode.

Flash point : Closed cup: 88°C (190.4°F)

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small Spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via licensed waste disposal contractor.

Large Spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergent contact information and Section 13 for waste disposal.

7. Handling and storage**Precautions for safe handling****Protective measures**

: Put on appropriate personal protective equipment (see Section 8).. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking, Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe

: Store in accordance with local regulations. Store in segregated and approved area. Store

storage including any incompatibilities

in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection**Control parameters****Occupational exposure limits**

None.

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and use the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted the times to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training and other important aspects of use.

9. Physical and chemical properties

Appearance

Physical state	: Liquid
Color	: Colorless
Odor	: Odorless
Odor threshold	: Not available
pH	: Not available
Melting point	: Not available
Boiling point	: Lowest known value: 230°C (446°F) (Dodecamethylpentasiloxane)
Flash Point	: Closed cup: 88°C (190.4°F)
Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Lower and upper explosive (flammable limits)	: Not available
Vapor pressure	: Highest known value: <0.1 kPa (<0.1 mm Hg) (at 20°C) (Dodecamethylpentasiloxane)
Vapor density	: Not available
Specific gravity	: Not available
Solubility	: Not available
Partition coefficient: n-	: Not available

octanol/water
Auto ignition temperature : Not available
Decomposition temperature : >150°C (>302°F)
Viscosity : Not available

10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product its ingredient.
Chemical stability : The product is stable
Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available

Potential chronic health effects

Not available

Irritation/Corrosion

Not available

Sensitization

Not available

Mutagenicity

Not available

Carcinogenicity

Not classified or listed by IARC, NTP, OSHA, EU and ACGIH

Reproductive toxicity

Not available

Teratogenicity

Not available

Specific target organ toxicity (single exposure)

Not available

Specific target organ toxicity (repeated exposure)

Not available

Aspiration hazard

Not available

12. Ecological information

Toxicity

Not available

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Dodecamethylpentasiloxane	-	-	Not readily


Bio accumulative potential

Not available

13. Disposal considerations

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or print used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

	DOT Classification	IMDG	IATA
UN number	NA1993	Not regulated	Not regulated
UN proper shipping name	Combustible liquid, n.o.s. (Dodecamethylpentasiloxane)	-	-
Transport hazard class(es)	Combustible liquid 	-	-
Packing group	III	-	-
Environmental hazards	No.	No.	No.
Additional information	Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials <u>Limited quantity</u> Yes. <u>Packaging instruction</u> Passenger aircraft Quantity limited: 60 L Cargo aircraft Quantity limited: 220 L <u>Special provisions</u> IB3, T4, TP1	-	-

Special precautions for user

: Transport with user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. Regulatory information

US Federal regulations : United States inventory TSCA 8b): All components are listed or exempted.

SARA 302/304

Composition/information on ingredients

No products were found

SARA 311/312

Classification : Fire hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Dodecamethylpentasiloxane	60-100	Yes	No	No	No	No

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer, birth defects or other reproductive harm.

International lists

National inventory

Australia inventory (AICS) : All components are listed or exempted.

Canada inventory : All components are listed or exempted.

China inventory (IECSC) : All components are listed or exempted.

EU Inventory : All components are listed or exempted.

Japan inventory (ENCS) : Japan inventory (ENCS): All components are listed or exempted.

Japan inventory (ISHL): Not determined

New Zealand Inventory of : All components are listed or exempted.

Chemicals (NZIoC)

Philippines inventory : All components are listed or exempted.

(PICCS)

Korea inventory (KECI) : All components are listed or exempted.

Taiwan inventory (TCSI) : All components are listed or exempted.

United States inventory (TSCA 8b) : All components are listed or exempted.

16. Other Information

Hazardous Material Information System (U.S.A.)

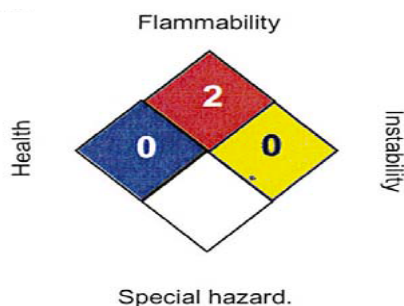
HEALTH	0
FLAMMABILITY	2
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Caution: HMIS® ratings are based on a 0-4 scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J.J. Keller (800) 327-68-68.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.):



Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.