**SECTION I: PRODUCT AND COMPANY IDENTIFICATION**

Product Name: **PSF-50cSt Dielectric Silicone Fluid**

Provided by: CLEARCO PRODUCTS CO. INC.,
15 York Rd.
Willow Grove, PA 19090 U.S.A.

Telephone No: 001 215 366-7860
Fax No: 001 215 366-7862
E-mail: info@clearcoproducts.com
Website: www.clearcoproducts.com

Emergency Telephone: CHEM TEL: 1-800-255-3924 (DOMESTIC)
+01-813-248-0585 (INTERNATIONAL)

General Description: Silicone Fluid, Polydimethylsiloxane
Physical Form: Liquid
Color: Colorless
Odor: Characteristic Odor

NFPA Profile: Health 0  Flammability 1  Instability/Reactivity 0
Note: NFPA = National Fire Protection Association

**SECTION II: HAZARDS IDENTIFICATION**

POTENTIAL HEALTH EFFECTS

**Acute Effects**
Eye: Direct contact may cause temporary redness and discomfort.
Skin: No significant irritation expected from a single short-term exposure.
Inhalation: No significant effects expected from a single short-term exposure.
Oral: Low ingestion hazard in normal use.

**Prolonged/Repeated Exposure Effects**
Skin: No known applicable information.
Inhalation: No known applicable information.
Oral: No known applicable information.

**Signs and Symptoms of Overexposure**
No known applicable information.

**Medical Conditions Aggravated by Exposure**
No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

**SECTION III: COMPOSITION/INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>CAS No.</th>
<th>% Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polydimethylsiloxane</td>
<td>63148-62-9</td>
<td>100</td>
</tr>
</tbody>
</table>

**SECTION IV: FIRST AID MEASURES**

Eye Contact: Immediately flush with water.
Skin Contact: No first aid should be needed.
Inhalation: No first aid should be needed.
Oral: No first aid should be needed.

Notes to Physician: Treat symptomatically.
**SECTION V: FIRE FIGHTING MEASURES**

Flash Point:
- >248°F/ >120 °C (Closed Cup)
- >482°F/ >250 °C (Cleveland Open Cup)

Autoignition Temperature: Not determined
Flammability Limits in Air: Not determined

Extinguishing Media: On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO2), dry chemical or water spray. Water can be used to cool fire exposed containers.

Fire Fighting Measures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

Unusual Fire Hazards: None

**SECTION VI: ACCIDENTAL RELEASE MEASURES**

Containment/Clean up: Determine whether to evacuate or isolate the area according to your local emergency plan. Observe all personal protection equipment recommendations described in Sections 5 and 8. For large spills, provide dikeing or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Clear area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and 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 federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See section 8 for Personal Protective Equipment for Spills. Call (1-800-255-3924), if additional information is required.

**SECTION VII: HANDLING AND STORAGE**

Use with adequate ventilation. Avoid eye contact.
Use reasonable care and store away from oxidizing materials.

**SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION**

Component Exposure Limits
There are no components with workplace exposure limits.

Engineering Controls
Local Ventilation: None should be needed.
General Ventilation: Recommended

Personal Protective Equipment for Routine Handling

<table>
<thead>
<tr>
<th>Eyes</th>
<th>Use proper protection- safety glasses as a minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Washing at mealtime and end of shift is adequate</td>
</tr>
<tr>
<td>Suitable Gloves</td>
<td>No special protection needed.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No respiratory protection should be needed.</td>
</tr>
<tr>
<td>Suitable Respirator</td>
<td>None should be needed</td>
</tr>
</tbody>
</table>

Personal Protective Equipment for Spills

<table>
<thead>
<tr>
<th>Eyes</th>
<th>Use proper protection-safety glasses as a minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Washing at mealtime and end of shift is adequate</td>
</tr>
<tr>
<td>Inhalation/´Suitable Respirator`</td>
<td>No respiratory protection should be needed</td>
</tr>
</tbody>
</table>

Precautionary Measures: Avoid eye contact. Use reasonable care.

Comments: When heated to temperatures above 150 degrees C in the presence of air, product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard, a known skin and respiratory sensitizer, and an irritant to the eyes, nose, throat, skin and digestive system. Safe handling conditions may be maintained by keeping vapor concentrations within the OSHA Permissible Exposure Limit for formaldehyde.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. For further information regarding aerosol inhalation toxicity, please refer to the guidance document.
regarding the use of silicone-based materials in aerosol applications that has been developed by the silicone industry (www.SEHSC.com) or contact Clearco Products customer service.

### SECTION IX: PHYSICAL & CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical Form</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic Odor</td>
</tr>
<tr>
<td>Specific Gravity @ 25 deg C</td>
<td>0.96</td>
</tr>
<tr>
<td>Viscosity</td>
<td>50cSt</td>
</tr>
<tr>
<td>Freezing</td>
<td>&lt;-25 deg C; -13 deg F</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt;65 deg C</td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate=1)</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Density</td>
<td>0.97 g/cm³</td>
</tr>
<tr>
<td>Solubility in Water (20C)</td>
<td>Insoluble</td>
</tr>
<tr>
<td>pH</td>
<td>Not determined</td>
</tr>
<tr>
<td>Volatile Content</td>
<td>Not determined</td>
</tr>
<tr>
<td>Solubility in Organic Solvent</td>
<td>Soluble in Tolene</td>
</tr>
<tr>
<td>(State Solvent)</td>
<td></td>
</tr>
<tr>
<td>VOC Excl. H2O &amp; Exempts (G/L)</td>
<td>14 g/l</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>&gt;248°F/ &gt;120 °C (Closed Cup)</td>
</tr>
<tr>
<td></td>
<td>&gt;482°F/ &gt;250 °C (Cleveland Open Cup)</td>
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</table>

### SECTION X: STABILITY AND REACTIVITY

- **Chemical Stability:** Stable
- **Hazardous Polymerization:** Hazardous polymerization will not occur.
- **Conditions to Avoid:** None
- **Material to Avoid:** Oxidizing material can cause a reaction.

**Hazardous Decomposition Products**

Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Silicon Dioxide. Formaldehyde.

### SECTION XI: TOXICOLOGICAL INFORMATION

**Acute Toxicology Data for Product**

- **Oral LD50:**
  - **Species:** Rat
  - **Test Results:** >50 ML/KG

**Special Hazard Information on Components**

No known applicable information.

### SECTION XII: ECOLOGICAL INFORMATION

**Environmental Fate and Distribution**

- **Air:** This product is a high molecular weight liquid polymer which has a very low vapor pressure (<1 mm Hg). As a result it is unlikely to become an atmospheric containment unless generated as an aerosol.

- **Water:** This product has very low solubility (<100 ppb). As it has a specific gravity of <1, if discharged to water, it will initially form a surface film. As the product is non volatile and has a high binding affinity for particulate matter, it will absorb to particulates and sediment out.

- **Soil:** If discharged to surface water, this product will bind to sediment. If discharged in effluent to a waste water treatment plant, the product is removed from the aqueous phase by binding to sewage sludge. If the sewage sludge is subsequently spread on soil the silicone product is expected to degrade.

**Degradation:** This product, polydimethylsiloxane, degrades in soil abiotically to form smaller molecules. These in turn are either biodegraded in soil or volatilized into the air where they are broken down in the presence of sunlight. Under appropriate conditions, the ultimate degradation products are inorganic silica, carbon dioxide and water vapor. Due to the very low solubility of this product, standard OECD protocols for ready and inherent biodegradability are not suitable for measuring the biodegradability of this product. The product is removed >80% during the sewage treatment process.

**Environmental Effects**
Toxicity to Water Organisms: Based on analogy to similar materials this product is expected to exhibit low toxicity to aquatic organisms.

Toxicity to Soil Organisms: Experiments show that when sewage sludge containing polydimethylsiloxane is added to soil, it has no effect on soil micro-organisms, earthworms or subsequent crops grown in the soil.

Bioaccumulation: This product is a liquid and is a high molecular weight polymer. Due to its physical size it is unable to pass through, or be absorbed by biological membranes. This has been confirmed by testing or analogy with similar products.

Fate and Effects in Waste Water Treatment Plants
This product or similar products has been shown to be non-toxic to sewage sludge bacteria.

Ecotoxicity Classification Criteria

<table>
<thead>
<tr>
<th>Hazard Parameters (LC50 or EC 50)</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Aquatic Toxicity (mg/L)</td>
<td>&lt;=1</td>
<td>&gt;1 and &lt;=100</td>
<td>&gt;100</td>
</tr>
<tr>
<td>Acute Terrestrial Toxicity</td>
<td>&lt;=100</td>
<td>&gt;100 and &lt;=2000</td>
<td>&gt;2000</td>
</tr>
</tbody>
</table>

This table is adapted from “Environmental Toxicology and Risk Assessment”, ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

SECTION XIII: DISPOSAL CONSIDERATIONS

RCRA Hazard Class (40 CFR 261)
When a decision is made to discard this material, as received, is it classified as a hazardous waste? No

State or local laws may impose additional regulatory requirements regarding disposal. Call (989) 496-6315, if additional information is required.

SECTION XIV: TRANSPORT INFORMATION

DOT Road Shipment Information (49 CFR 172.101)
Not subject to DOT.

Ocean Shipment (IMDG)
Not subject to IMDG code.

Air Shipment (IATA)
Not subject to IATA regulations

Call Clearco Products Co Inc, (215) 639-2640, if additional is required.

SECTION XV: REGULATORY INFORMATION


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

EPA SARA Title III Chemical Listings
Section 302 Extremely Hazardous Substances (40 CFR 355): None
Section 304 CERCLA Hazardous Substances (40 CFR 302): None
Section 311/312 Hazard Class (40 CFR 370):
Acute: No
Chronic: No
Fire: No
Pressure: No
Reactive: No

Section 313 Toxic Chemicals (40 CFR 372): None present or none present in regulated quantities
Note: Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold.

Supplemental State Compliance Information

California
Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

None known.

Massachusetts
No ingredient regulated by MA Right-to-Know Law present.

New Jersey

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Pennsylvania

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SECTION XVI: OTHER INFORMATION

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.