SECTION 1. IDENTIFICATION

Material Identification: Silsurf A004-UP
   Chemical Name: 3-(Polyoxyethylene)propyloctyltrimethylsiloxane
   Chemical Classification: Silicone
   CAS #: 67674-67-3
   INCI Name: PEG-4 Dimethicone

Company Identification: Siltech Corp.
   225 Wicksteed Avenue
   Toronto, Ontario
   Canada
   M4H 1G5
   (416) 424-4567

Recommended Product Usage
Silicone Surfactant
Wetting Agent

SECTION 2. HAZARD(S) IDENTIFICATION

HAZARD CLASSIFICATION:
Acute Toxicity Category 4
Serious Eye Damage Category 1
Chronic Aquatic Toxicity Category 2

GHS LABEL ELEMENTS (including precautionary statements):

Symbol:

Signal Word: Danger

Hazard Risk Statement:
H332: Harmful if inhaled
H318: Causes serious eye damage
H411: Toxic to aquatic life with long lasting effects

Precautionary Statement:
Prevention:
P261: Avoid breathing mist/vapours/spray.
P271: Use in well ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/ protective clothing/eye protection/face protection.

Response:
P305+P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313: Get medical advice/attention.

Storage: P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

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

OTHER HAZARD (risk not included in classification): None known.
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Name or Synonym</th>
<th>CAS No.</th>
<th>EINECS/ELINCS No.</th>
<th>% (w/w)</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly(oxy-1,2-ethanediyl), alpha-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl]-omega-hydroxy-</td>
<td>3-(Polyoxyethylene)propyl-heptamethyltrisiloxane</td>
<td>67674-67-3</td>
<td>N/A</td>
<td>&gt; 80</td>
<td>Acute Tox.:Cat 4 Serious Eye Dam.: Cat 1 Chronic Aqu. Tox: Cat2</td>
</tr>
</tbody>
</table>

Other ingredients not listed in this section are non-hazardous.

SECTION 4. FIRST AID MEASURES

**Eyes**: Immediately flush with water for 15 minutes. Obtain medical attention if irritation occurs.

**Skin**: Remove contaminated clothing and wash with soap and water. Obtain medical attention if irritation occurs.

**Inhalation**: If first aid is required move victim to fresh air. Give artificial respiration is not breathing. If breathing is difficult, give oxygen. Obtain medical attention.

**Ingestion**: Do not induce vomiting and obtain medical attention immediately.

SECTION 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media**: Carbon dioxide, foam, or water spray. Water can be used to cool fire exposed containers.

**Unsuitable Extinguishing Media**: Dry chemical.

**Specific Hazards Arising from the Chemical**: Silicon Dioxide. Carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde.

**Special Protective Actions for Fire-Fighters**: Self-contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals. Use water spray to cool fire exposed containers.

SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions and Protective Equipment**: Avoid eye and skin contact. Use personal protective equipment.

**Environmental Precautions**: Prevent from entering drains or water sources.

**Containment/Clean up**: Collect for disposal. Clean up remaining materials from spill with suitable absorbent. For large spills provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean area as appropriate since some silicone material, even in small quantities, may present a slip hazard. Final cleaning may require steam, solvents or detergents.

SECTION 7. HANDLING AND STORAGE

**Handling Precautions**: Avoid eye and skin contact. Do not take internally. Use with adequate ventilation. Wash after handling. Exercise good industrial hygiene practice.

**Storage Conditions**: Keep container tightly closed and away from oxidizing materials.
SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT VALUES / BIOLOGICAL LIMIT VALUES:

Industrial Hygiene Standards

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ENGINEERING CONTROLS:
Local Ventilation: Recommended.
General ventilation: Recommended.

PERSONAL PROTECTIVE EQUIPMENT:
Respiratory protection: In the case of vapour formation use a respirator with an approved filter.
Hand protection: Chemical protective gloves are recommended (Rubber, Neoprene, or Nitrile).
Eye protection: Use proper protection - safety glasses as a minimum.
Skin protection: Impervious clothing.
Hygiene measures: Observe good industrial hygiene practices. Wash after handling.

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless to Yellow</td>
</tr>
<tr>
<td>Odour</td>
<td>Mild</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt;100°C (Pensky-Martens closed cup)</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability Limits</td>
<td>Not determined</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Specific Gravity @25°C</td>
<td>0.99</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Viscosity@25°C</td>
<td>10 - 40 cps</td>
</tr>
<tr>
<td>Melting/Freezing Point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Initial Boiling Point</td>
<td>&gt;100°C @ 760 mmHg</td>
</tr>
<tr>
<td>Boiling Range</td>
<td>Not determined</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No</td>
</tr>
<tr>
<td>Vapour Pressure @25°C</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour Density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH</td>
<td>Not determined</td>
</tr>
<tr>
<td>Oxidising Properties</td>
<td>No</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
Conditions to Avoid: Exposure to moisture. (may liberate hydrogen gas)
Incompatible Materials: Strong oxidizing material can cause a reaction.

Hazardous Decomposition Products: The following decomposition products may form during fire or at very high temperatures: Carbon Oxides, Silicon dioxide, Formaldehyde, and traces of incompletely burned carbon compounds.
### LIKELY ROUTES OF EXPOSURE:
- **Respiratory:** Exposure is expected.
- **Oral:** Exposure is expected.
- **Eye, Skin:** Exposure is expected.

### INFORMATION ON THE HEALTH HAZARDS:

#### Acute Toxicity
- **Skin:** LD₅₀ Dermal (rabbit): > 2000 – 5000 mg / kg
- **Inhalation:** LC₅₀ (rabbit): 2.3 mg/l , 4 hr (test atmosphere = dust / mist)
- **Ingestion:** LD₅₀ Oral (rat): > 5050 mg/kg

#### Chronic Toxicity
- **Skin:** No known applicable information.
- **Inhalation:** No known applicable information.
- **Ingestion:** Repeated ingestion or swallowing large amounts may injure internally.
- **Other Health Hazard:** No known applicable information.

#### Skin Corrosion/Irritation
- Not classified (Rabbit ñ no skin irritation)

#### Serious Eye Damage/Irritation
- Rabbit ñ causes serious eye damage. (irreversible effects)

#### Respiratory Sensitization
- Not classified based on available information.

#### Skin Sensitization
- Not classified based on available information.

#### Carcinogenicity
- Not classified based on available information.

#### Germ Cell Mutagenicity
- Not classified based on available information.

#### Reproductive Toxicity
- Not classified based on available information.

#### Specific Target Organ
- Not classified based on available information.
  (Systemic Toxicity ñ Single exposure)

#### Specific Target Organ
- Not classified based on available information.
  (Systemic Toxicity ñ Repeated exposure)

#### Aspiration Hazard
- Not classified based on available information.
### SECTION 12. ECOTOLOGICAL INFORMATION

**ECOTOXICITY:**

Environment Effects

- **Acute:** Fish: LC50 > 1 – 10 mg/l, exposure time – 96h
  - Daphnia sp (water flea): EC50 > 1 – 10 mg/l, exposure time – 48h

- **Chronic:** Toxic to aquatic life with long lasting effects.

**PERSISTENCE AND DEGRADABILITY:**

- **Degradation:** In soil, siloxanes are degraded.
- **Environmental Fate and Distribution:** Siloxanes are removed from water by sedimentation sewage or binding to sludge.

**BIOACCUMULATIVE POTENTIAL:**

- **Bioaccumulation:** No known applicable information.

**MOBILITY IN SOIL:**

None known.

**OTHER ADVERSE EFFECTS:**

None known.

### SECTION 13. DISPOSAL CONSIDERATIONS

**Product Disposal:** Do not dispose of waste into sewer. Dispose of in accordance with local regulations.

**Packaging Disposal:** Dispose of in accordance with local regulations.
### SECTION 14. TRANSPORTATION INFORMATION

#### AIR TRANSPORT (IATA):
- **UN No.**: 3082
- **Proper Shipping Name**: Environmentally hazardous substance, liquid, n.o.s. (3-(Polyoxyethylene)propylheptamethyltrisiloxane)
- **Class**: 9
- **Packing group**: III
- **Labels**: Misc. dangerous goods

#### SEA TRANSPORT (IMDG):
- **UN No.**: 3082
- **Proper Shipping Name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (3-(Polyoxyethylene)propylheptamethyltrisiloxane)
- **Class**: 9
- **Packing group**: III
- **Emergency Schedule**: F-A
- **(EmS)**: S-F
- **Marine pollutant**: 3-(Polyoxyethylene)propylheptamethyltrisiloxane

#### ROAD / RAIL (ADR/RID):
- **UN No.**: 3082
- **Proper Shipping Name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (3-(Polyoxyethylene)propylheptamethyltrisiloxane)
- **Class**: 9
- **Packing group**: III
- **Labels**: 9
**SECTION 15. REGULATORY INFORMATION**

### CHEMICAL INVENTORIES:

<table>
<thead>
<tr>
<th>Country</th>
<th>Regulation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>TSCA: (USA)</td>
<td>All ingredients are on the inventory.</td>
</tr>
<tr>
<td></td>
<td>DSL: (Canada)</td>
<td>All ingredients are on the inventory.</td>
</tr>
<tr>
<td>EU</td>
<td>EINECS: (EU)</td>
<td>All ingredients are exempted (polymer) from the inventory.</td>
</tr>
<tr>
<td>Australia</td>
<td>AICS: (Australia)</td>
<td>All ingredients are on the inventory.</td>
</tr>
<tr>
<td>China</td>
<td>IECS: (China)</td>
<td>All ingredients are on the inventory.</td>
</tr>
<tr>
<td>Japan</td>
<td>MITI: (Japan)</td>
<td>All ingredients are on the inventory.</td>
</tr>
<tr>
<td>Korea</td>
<td>KECI: (Korea)</td>
<td>All ingredients are on the inventory.</td>
</tr>
<tr>
<td>New Zealand</td>
<td>NZIoC: (New Zealand)</td>
<td>All ingredients are on the inventory.</td>
</tr>
<tr>
<td>Taiwan</td>
<td>CSNN: (Taiwan)</td>
<td>All ingredients are on the inventory.</td>
</tr>
<tr>
<td>Philippines</td>
<td>PICCS: (Philippines)</td>
<td>All ingredients are on the inventory.</td>
</tr>
</tbody>
</table>

**USA**

**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

**Supplemental State Compliance Information**

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

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

**Massachusetts / New Jersey / Pennsylvania**

Does not contain substances at levels which would require listing.

**KOREA**

- Classification and labelling in accordance with Industrial Safety and Health Law: No subject chemicals.
- Chemicals controlled in accordance with Toxic Chemicals Control Act: No subject chemicals.
- Wastes Management Act: Product should be disposed of in accordance with Waste Management Law Article 12.

**GERMANY**

Wassergefährdungsklasse (water hazard class) : WGK 1

**GHS**

- Hazard statement(s) and Precautionary statement(s):
  - H332: Harmful if inhaled
  - H318: Causes serious eye damage
  - H411: Toxic to aquatic life with long lasting effects
  - P261: Avoid breathing mist/vapours/spray.
  - P271: Use in well ventilated area.
  - P273: Avoid release to the environment.
  - P280: Wear protective gloves/ protective clothing/eye protection/face protection.

**Hazard pictogram(s)**
SECTION 16. OTHER INFORMATION

The data in this SDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. This data is 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.

SDS prepared by: Raj Moonsammy
Address: Siltech Corp
225 Wicksteed Avenue
Toronto, Ontario, Canada M4H 1G5
Telephone: (416) 424-4567

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This is the last page.