1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION:

Product Name: Silicone  
Date of Prep: October 18, 2012  
Revision: A

2. COMPOSITION/INFORMATION ON INGREDIENTS:

<table>
<thead>
<tr>
<th>CHEMICAL INGREDIENT NAME</th>
<th>CAS NUMBER</th>
<th>EC NUMBER</th>
<th>% BY WT.</th>
<th>OSHA</th>
<th>ACGIH</th>
<th>HAZARD SYMBOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polydimethylsiloxane</td>
<td>63148-62-9</td>
<td></td>
<td>&gt;60%</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION:

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.

4. FIRST AID MEASURES:

Inhalation: No first aid should be needed.  
Skin Contact: Nor first aid should be needed.  
Eye Contact: Immediately flush with water.  
Ingestion: No first aid should be needed.

Note to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES:

Flammable Properties: Flash point range, >248°F / >120°C. Closed cup.
Extinguishing Media: Carbon dioxide, water spray, dry chemical foam. Water can be used to cool fires exposed containers.
Unique Aspects Contributing To a Fire: None.

Special Fire Fighting Procedures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals.

6. ACCIDENTAL RELEASE MEASURES:

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 spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Observe all personal protection equipment recommendations described in Sections 5 and 8. 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.

7. HANDLING AND STORAGE:

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Handle in accordance with good laboratory practices.
Respiratory Protection: No respiratory protection should be needed.
Eye Protection: Use proper protection – safety glasses as a minimum.
Skin Protection: Washing at mealtime and end of shift is adequate.
Engineering Controls: Local ventilation: none should be needed. General ventilation: recommended. 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).
9. PHYSICAL AND CHEMICAL PROPERTIES:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>colorless</td>
</tr>
<tr>
<td>Physical State</td>
<td>liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>characteristic odor</td>
</tr>
<tr>
<td>pH</td>
<td>NE</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.97 @ 25°C</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt;248°F / &gt;120°C. Closed cup.</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>NE</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt;65°C</td>
</tr>
<tr>
<td>Melting Point</td>
<td>NE</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>NE</td>
</tr>
<tr>
<td>Vapor Density (air=1)</td>
<td>NE</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>NE</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY:

- Hazardous Polymerization: Will Not Occur
- Stability: Stable
- Hazardous Decomposition/Combustion Products: Oxidizing material can cause a reaction.
- Conditions & Materials to Avoid: None

11. TOXICOLOGICAL INFORMATION: No known applicable information.

12. ECOLOGICAL INFORMATION: Environmental Fate and Distribution:

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

13. DISPOSAL CONSIDERATIONS: Must be in accordance with applicable Federal, State/Province and local regulations.

14. TRANSPORT INFORMATION: Not subject to DOT or IATA regulations.

15. 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.

16. OTHER INFORMATION:

<table>
<thead>
<tr>
<th>U.S. EPA SARA</th>
<th>National Fire Protection Association Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>313 Chemicals</td>
<td>CERCLA RQ</td>
</tr>
<tr>
<td></td>
<td>HEALTH 0</td>
</tr>
<tr>
<td></td>
<td>FLAMMABILITY 1</td>
</tr>
<tr>
<td></td>
<td>REACTIVITY 0</td>
</tr>
<tr>
<td></td>
<td>OTHER</td>
</tr>
</tbody>
</table>

Notes: Not Established (NE) means a value has not been set or there is no information available. Not Applicable (NA) means that the topic is not pertinent.

The information contained herein has been compiled from data presented in various technical sources believed to be accurate. Waters makes no warranties and assumes no liability in connection with the use of this information. It is the user’s responsibility to determine the suitability of this information and to assure the adoption of necessary precautions.