Safety Data Sheet


1. Material / Company Identification

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>Functional V-178</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEMICAL FAMILY</td>
<td>Polymeric Hydrocarbon in Mineral Oil</td>
</tr>
<tr>
<td>PRODUCT USE</td>
<td>Tackifier</td>
</tr>
<tr>
<td>CAS REGISTRY NUMBER</td>
<td>Mixture</td>
</tr>
<tr>
<td>REVISION DATE</td>
<td>April 18, 2012</td>
</tr>
</tbody>
</table>

Manufacturer/Supplier

FUNCTIONAL PRODUCTS INC.
8282 Bavaria Road
Macedonia, Ohio 44056, USA
Tel: 330-963-3060 Fax: 330-963-3322

2. Hazards Identification

May be harmful if swallowed. May irritate eyes and skin.

3. Composition

<table>
<thead>
<tr>
<th>Substance/Preparation</th>
<th>% (w/w)</th>
<th>CAS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Oil</td>
<td>90 – 100</td>
<td>64742-58-1</td>
</tr>
<tr>
<td>Polyisobutylene</td>
<td>0 – 10</td>
<td>9003-27-4</td>
</tr>
</tbody>
</table>

4. First Aid Measures

Inhalation: Remove to fresh air. Get medical attention. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: Do NOT induce vomiting. Seek medical attention immediately. Never give anything by mouth to an unconscious person.

Skin Contact: Wash with soap and water. Get medical attention if irritation develops.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention.
5. **Fire Fighting Measures**

Extinguishing Media: CO₂, regular foam, dry chemical, water spray or fog.

Protective Equipment: A positive-pressure, self-contained breathing apparatus and full body protective equipment.

Hazardous Combustion Products: Decomposition and combustion materials may be toxic. Burning may produce sulfur oxides, aldehydes, ketones, carbon monoxide and unidentified organic compounds.

6. **Accidental Release Measures**

Personal Precautions: Personal Protective Equipment must be worn. Keep unnecessary personnel away. Remove all ignition sources.

Environmental Precautions and Clean Up Methods: Spills should be contained, absorbed and containerized for disposal in accord with local, state and federal regulations. Prevent entry to sewers and water-way.

7. **Handling and Storage**

Handling: Keep away from sparks or flame. Use in well-ventilated area, do not breathe vapor or mist. Avoid contact with eyes, skin, clothing and shoes.

Storage: Keep container tightly closed, in cool, well ventilated area. Keep containers away from flame, sparks, static electricity or other sources of ignition.

8. **Exposure Controls / Personal Protection**

Ventilation: Use with adequate ventilation.

Hands: Use chemical resistant, impervious gloves.

Eyes: Use safety glasses, goggles or face mask.

Clothing: Long sleeve shirt is recommended.

Respiratory: Use appropriate respiratory protection when concentration of vapor or mist exceeds exposure limits.

**OCCUPATIONAL EXPOSURE LIMITS**

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>OEL USA</th>
<th>OEL CANADA</th>
<th>OEL EUROPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PETROLEUM OIL</td>
<td>TWA: 5 STEL: 10 (mg / m³) from ACGIH (TLV)</td>
<td>TWA: 5 STEL 10 (mg / m³)</td>
<td>TWA: 5 (mg / m³) from EH40 (UK)</td>
</tr>
<tr>
<td></td>
<td>TWA: 5 (mg / m³) from OSHA (PEL)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9. **Physical and Chemical Properties**

Physical State: Tacky viscous liquid  
Color: Yellow  
Odor: Mild petroleum odor.  
Density: 0.85 g / cm³ at 15 deg C (59 Deg F)  
Solubility: Insoluble in water.  
Boiling Point: 700 – 800 F.  
Vapor Pressure: Nil  
Evaporation Rate: < 1

10. **Reactivity and Stability**

Stability: The product is stable.  
Incompatibility: Avoid oxidizing agents.  
Conditions to Avoid: Avoid sparks or flame.

11. **Toxicological Information**

**Acute Exposure**  
May be harmful if swallowed. May irritate eyes and skin. May cause throat irritation, nausea, vomiting and diarrhea. Aspiration hazard.

**Chronic Exposure**

Eye  
Presumed to be mild irritant.

Skin  
Prolonged contact may cause irritation.

Inhalation  
No data available to indicate product or components maybe a toxic inhalation hazard.

**Chronic Toxicity**  
Based on best current information, there is no known human sensitization associated with this product.

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

**Teratogenicity**  
Based on best current information, there is no known teratogenicity associated with this product.

**Reproductive Toxicity**  
Based on best current information, there is no known reproductive toxicity associated with this product.

**Toxicity Data**

**Oral**  
LD 50 Rat > 2000 mg/kg

**Dermal**  
LD 50 Rat > 2000 mg/kg

12. **Ecological Information**

Environmental  
Not readily biodegradable

Bioaccumulation  
Not available

Fish Toxicity  
The acute LC50 is > 1000 ppm.

Algae Toxicity  
The acute EC50 is 10 – 100 ppm.

Bacteria Toxicity  
The acute EC50 is > 1000 ppm.
13. **Disposal Considerations**

Waste Disposal

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. **Transportation Information**

<table>
<thead>
<tr>
<th></th>
<th>U.S DOT BULK</th>
<th>U.S. DOT NON-BULK</th>
<th>IMDG CODE</th>
<th>ICAO</th>
<th>ADR/RID HAZARD CLASS</th>
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</thead>
</table>

15. **Regulatory Information**

<table>
<thead>
<tr>
<th></th>
<th>U.S.TSCA INVENTORY</th>
<th>Other TSCA Reg.</th>
<th>SARA EXT. HAZ. SUBS.</th>
<th>SARA Section 313</th>
<th>CERCLA</th>
<th>CA PROP. 65</th>
<th>JAPAN MITI</th>
<th>AUSTRALIA</th>
<th>EUROPE</th>
<th>CHINA</th>
<th>CANADA</th>
<th>KOREA</th>
<th>NEW ZEALAND</th>
<th>PHILIPPINES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>All components are listed on MITI inventory.</td>
<td>All components are listed on AICS inventory.</td>
<td>Petroleum oil is listed on EINECS inventory. Polymers are exempt from EINECS inventory under the polymer exemption.</td>
<td>All components are listed on China’s inventory.</td>
<td>All components are listed on DSL inventory.</td>
<td>WHMIS – not controlled.</td>
<td>All components are in compliance in Korea.</td>
<td>All components are listed on NZIoC inventory.</td>
</tr>
</tbody>
</table>

16. **Other Information**

<table>
<thead>
<tr>
<th></th>
<th>NFPA CODE</th>
<th>HMIS CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Health: 1</td>
<td>Fire: 1</td>
</tr>
<tr>
<td></td>
<td>Health: 1</td>
<td>Fire: 1</td>
</tr>
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</table>

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