SAFETY DATA SHEET

According REACH Title IV, Annex II and Format ISO 11014 PIB – and also with:

1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>FUNCTIONAL HF-546</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEMICAL FAMILY</td>
<td>MIXTURE</td>
</tr>
<tr>
<td>PRODUCT USE</td>
<td>Hydraulic Fluid Package for Biodegradable Base Oils</td>
</tr>
<tr>
<td>CAS REGISTRY NUMBER</td>
<td>MIXTURE</td>
</tr>
<tr>
<td>REVISION DATE</td>
<td>March 7, 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

EYES: This product is an eye irritant.

SKIN: May be irritating to the skin. Prolonged or repeated contact with skin may cause mild irritation and possible dermatitis.

INGESTION: May be harmful if swallowed. Do not induce vomiting.

INHALATION: Harmful if aspirated into the lungs.

CARCINOGENICITY: Not listed as a carcinogenic.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>SUBSTANCE/ PREPARATION</th>
<th>(% w/w)</th>
<th>CAS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copolymer</td>
<td>20 – 40</td>
<td>proprietary</td>
</tr>
<tr>
<td>Ortho-tert-butylphenol</td>
<td>0 - 5</td>
<td>88-18-6</td>
</tr>
<tr>
<td>Butylated Phenols</td>
<td>0 - 5</td>
<td>73226-3</td>
</tr>
<tr>
<td>Phenol</td>
<td>0 - 5</td>
<td>108-95-2</td>
</tr>
<tr>
<td>Alkyl Acid Phosphate</td>
<td>0 – 5</td>
<td>68307-94-8</td>
</tr>
<tr>
<td>Benzenamine</td>
<td>0 - 5</td>
<td>68411-46-1</td>
</tr>
<tr>
<td>Tolyltriazole</td>
<td>0 – 5</td>
<td>29395-43-1</td>
</tr>
<tr>
<td>Vegetable Oil</td>
<td>15 - 30</td>
<td>120962-03-0</td>
</tr>
</tbody>
</table>
4. **FIRST-AID MEASURES**

**INHALATION:** If inhaled, remove to fresh air. Get medical attention. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**INGESTION:** If affected person is conscious, give plenty of water to drink. Never give anything to drink to an unconscious person. Get medical attention if symptoms appear. Do not induce vomiting.

**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. Get medical attention if irritation occurs.

5. **FIRE-FIGHTING MEASURES**

**FLASH POINT:** > 150°C / 302°F

**UPPER FLAMMABLE LIMIT:** Not determined.

**LOWER FLAMMABLE LIMIT:** Not determined.

**EXTINGUISHING MEDIA** In case of fire use water spray (fog), foam or dry chemicals.

**HAZARDOUS COMBUSTION PRODUCTS** Oxides of carbon, phosphorus and nitrogen; smoke and fumes.

**FIRE-FIGHTING PROCEDURES** Recommended wearing self-contained breathing apparatus and full turnout gear.

6. **ACCIDENTAL RELEASE MEASURES**

**PERSONAL PRECAUTIONS** Personal Protective Equipment must be worn. Keep unnecessary personnel away.

**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:** Wash thoroughly after handling.

**STORAGE:** Keep container tightly closed, in cool, well ventilated area.
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 SYSTEM Use appropriate respiratory protection if there is the potential

9. **PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE: Liquid
COLOR: Amber
ODOR: Sweet odor.
DENSITY: 0.92 g / cm3 at 15 deg C (59 Deg F)
SOLUBILITY: Insoluble in water.
BOILING POINT: N / A
VAPOR PRESSURE: < 0.1
EVAPORATION RATE: < 1

10. **STABILITY AND REACTIVITY**

STABILITY: The product is stable.
INCOMPATIBILITY: Strong oxidants and reducing agents.
CONDITIONS TO AVOID: Not known.

11. **TOXICOLOGICAL INFORMATION**

SENSITIZATION: Based on current information, there is no known human sensitization associated with this product.
MUTAGENICITY: Experimental evidence suggests that this product does not cause mutagenesis.
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.

12. **ECOLOGICAL INFORMATION**

ENVIRONMENTAL HAZARDS This product is classified as a ‘Marine Pollutant’.
FISH TOXICITY Not available
ALGAE TOXICITY Not available
BACTERIA TOXICITY Not available
13. **DISPOSAL CONSIDERATIONS**

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

14. **TRANSPORTATION INFORMATION**

**U.S. DOT**
- Description/Proper Shipping Name: Environmentally Hazardous Substances, Liquid, N.O.S. (Alkylphenols)
- U.S. DOT Hazard Class: 9
- U.S. DOT ID Number: UN3082
- U.S. DOT Packing Group: III

15. **REGULATORY INFORMATION**

**U.S. TSCA INVENTORY**
- Yes

**SARA EXT. HAZ. SUBS.**
- No

**SARA Section 311/312**
- Health: immediate (acute)
- Health: Delayed (chronic)

**SARA Section 313**
This product contains a toxic chemical for routine annual toxic chemical release reporting under Section 313 (40 CFR 40 372). Chemical name: diphenylamine
- Common name: diphenylamine
- CAS Number: 122-39-4
- % in Composition: 0-0.2

**CERCLA**
- No

**JAPAN MITI**
- All components are listed on MITI inventory.

**AUSTRALIA**
- All components are listed on AICS inventory.

**EUROPE**
- All components are listed on EINECS inventory.

**CANADA**
- All components are listed on DSL inventory.

**KOREA**
- All components are listed on ECI inventory.

**CHINA**
- All components are listed on China’s inventory

**PHILIPPINES**
- All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act Of 1990 (R.A. 6969).

16. **OTHER INFORMATION**

**NFPA CODE**
- Health: 2
- Fire: 1
- Reactivity: 0

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