SAFETY DATA SHEET


Section 1: PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Paratac XT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Family</td>
<td>Polymeric Hydrocarbon In Mineral Oil</td>
</tr>
<tr>
<td>Product Use</td>
<td>Tackifier – Lubricant Additive</td>
</tr>
<tr>
<td>CAS Registry Number</td>
<td>Mixture</td>
</tr>
<tr>
<td>Revision Date</td>
<td>July 6, 2017</td>
</tr>
</tbody>
</table>

Manufacturer: Functional Products, Inc. Distributed by:
8282 Bavaria Road
Macedonia, Ohio 44056, USA
Tel (USA): +1 330-963-3060
Fax (USA): +1 330-963-3322
E-mail: SDS@functionalproducts.com

European Supplier: Lumar Quimica S.L.U.
Milanesat, 25-27, 4t. 1a.
08017 Barcelona
Spain
Tel: + 34 93 594 75 00
Fax: + 34 93 594 75 01
E-mail: lumar@lumarquimica.com

Emergency Phone Numbers:
United States: + 330-963-3060 (8:00AM-5:00PM EST)
Europe: + 34 93 594 75 00 (08:00 -13:00  14:00-17:00)
France (ORFILA): + 33 (0)1 45 42 59 59

Section 2: HAZARDS IDENTIFICATION

This material is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

According to Regulation (EC) N° 1272/2008 [CLP]
This is not a hazardous substance or mixture according Regulation (EC) No. 1272/2008.
No need for classification according to GHS criteria for this product.

According to Directive 67/548/EEC or 1999/45/EC
This is not a hazardous substance of mixture according to EC-directives 67/548/EEC or 1999/45/EC.
This material has no known hazards, if the regulations/notes for storage and handling are considered and followed.
2.2 LABEL ELEMENTS

Globally Harmonized System, EU (GHS)
The product does not require a hazard warning label in accordance with GHS criteria.

According to Regulation (EC) No 1272/2008 [CLP]
The product does not require a hazard warning label in accordance with Regulation (EC) No. 1272/2008.

According to Directive 67/54//EEC or 1999/45/EC
European Economic Community (EEC) Directives
The product does not require a hazardous warning label in accordance with EEC Directives.

2.3 OTHER ELEMENTS
Contact with hot material may cause thermal burns
This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).
This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS number or other code</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly refined mineral oil</td>
<td>64741-89-5</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>Highly refined mineral oil</td>
<td>64742-54-7</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>Highly refined mineral oil</td>
<td>64742-65-0</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
</tbody>
</table>

All concentrations are weight percent units for liquids or volume percent units for gaseous products.

Other ingredients are either not hazardous or are below the regulatory disclosure limit.

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

Section 4: FIRST–AID MEASURES

General advice : No hazards which require special first aid measures.
If inhaled : Remove to fresh air. Get medical attention.
In case of skin contact : Take off contaminated shoes and clothing immediately. Wash with soap and water. If symptoms persist, seek medical attention.
In case of eye contact : Immediately flush eyes with plenty of water. Remove contact lenses. Seek medical attention if irritation occurs. Protect unharmed eye.
If swallowed : Do NOT induce vomiting. Seek medical attention immediately. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed

**Symptoms**: No symptoms known or expected

**Indication of any immediate medical attention and special treatment needed**

**Treatment**: No hazards which require special first aid measures. If a person vomits when lying on his back, place him in the recovery position. Keep patient warm and at rest.

**Protection of first-aid responders**: For personal protection see section 8.

---

**Section 5: FIRE-FIGHTING MEASURES**

**Extinguishing media**

**Suitable extinguishing media**: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames

**Unsuitable extinguishing media**: Do NOT use water jet.

**Specific hazards arising from the chemical**

**Combustibility**: Not classified as flammable or combustible, but will combust if ignited.

**Hazardous combustion unburned products**: Carbon monoxide, carbon dioxide and hydrocarbons (smoke). Sulphur oxides

**Flammable properties**: See Section 9 for information on flammability.

**Special protective equipment and precautions for fire fighters**

**Protective equipment and precautions for firefighters**: In the event of fire, wear self-contained breathing apparatus.

**Fire Fighting Instructions**: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

---

**Section 6: ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures equipment**: Advice for emergency responders

- Ensure adequate ventilation.
- Use personal protective

Material can create slippery conditions. For personal protection see section 8.

Advice for non-emergency personnel
Avoid contact with spilled material. Do not touch or walk through spilled material.

Environmental precautions:
- Prevent entry into waterways, sewers, basements or confined areas.
- Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so.
- Try to prevent the material from entering drains or water courses.
- If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning recovery up:
- Prevent further leakage or spillage if safe to do so.
- Large Spills: Dyke far ahead of liquid spill for later and disposal.
- Recover by pumping or with suitable absorbent.
- Report spills as required to appropriate authorities.
- Seek the advice of a specialist before using dispersants. Dispose of according to local regulations.
- In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. Material will float on water, use containment booms as a barrier to protect shorelines.
- Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal.
- Clean contaminated floors and objects thoroughly while observing environmental regulations.

Reference to other sections
Other information: For personal protection see section 8.

Section 7: HANDLING AND STORAGE

Precautions for safe handling
- For personal protection see section 8.
- Smoking, eating and drinking should be prohibited in the application area.
- Dispose of rinse water in accordance with local and national regulations.
- For safety reasons, free water must be avoided when product is handled above 95deg C.
- Free water is always detrimental to product quality.

Normal measures for preventive fire protection.
- Products may load from unctional Products Inc. manufacturing site above the standard loading/unloading range.

Loading/unloading temperature: 80 °C (176 ° F) - 100 °C (212 ° F)

Viscosity @ Loading/unloading:
- 900 cSt - 1,400 cSt
Static accumulator: This material is not a static accumulator.

**Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place. No decomposition if stored and applied as directed. Do not reheat above: 100 °C (212 ° F)

Storage temperature: <= 80 °C (176 ° F)

Incompatible materials and coatings: No data available

---

### Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Limit Values**

Exposure limits for materials that can be formed when handling this product: When mists/aerosols can occur, the following are recommended: 5mg/m³ - ACGIH TLV, 10 mg/m³ - ACGIH STEL. Limits/standards shown for guidance only. Follow applicable regulations.

**Occupational exposure controls**

Appropriate engineering and controls: No special requirements under ordinary conditions of use with adequate ventilation.

**Individual protection measures, such as personal protective equipment**

Respiratory protection: Use appropriate respiratory protection if there is any potential for uncontrolled release or exposure levels are not known.

Hand protection: Use chemical resistant, impervious gloves.

Eye protection: Use safety glasses, goggles or face mask.

Skin and body protection: Long sleeve shirt is recommended

**Advice on general occupational hygiene**

Hygiene measures: Wash hands before breaks and immediately after handling the product.

Remove contaminated clothing and protective equipment before entering eating areas.

---

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are below. Consult the Supplier in Section 1 for additional data.

**Information on basic physical and chemical properties**

| Physical state | liquid |
| Form | viscous |
| Color | No data available |
Odor : hydrocarbon-like
Odor Threshold : not determined

**Important health safety and environmental information**

Relative density : 0.864 at 15.6 °C (60.1 ° F)
Method : ASTM D4052
Bulk density : Not applicable
Density : 0.865 g/cm3 at 15 °C (59 °F)
Flash point : 187 °C (369 °F)
Method : Pensky-Martens Closed Cup (ASTM D93)

Flammability (solid, gas) : not determined
Lower flammability limit : not determined
Upper flammability limit : not determined
Autoignition temperature : not applicable
Initial boiling point and boiling range : not determined

Vapor density (Air = 1.0) : not determined
Vapor pressure : < 0.1 hPa (< 0.1 mmHg) at 20 °C (68 °F) estimated

Evaporation rate (N-butyl acetate=1): Not applicable
pH : Not applicable
Partition coefficient
n- octanol/water : NA
Water solubility, est : < 0.0001 g/l estimated
Viscosity, kinematic : 900 mm2/s at 100 °C (212 °F)
Method: ASTM D 445

5,500 mm2/s at 40 °C (104 °F)
2,566 mm2/s at 60 °C (140 °F)
1,407 mm2/s at 80 °C (176 °F)

Explosive properties : not determined
Oxidizing properties : See sections 3, 15
Decomposition temperature : not determined
Pour point : not determined
Melting point/freezing point : not determined

Other information
DMSO extract by IP346 : Less than 3.0 wt% (mineral oil component only)
Coefficient of thermal expansion : 0.00079 1/°C ITM 50-020

**Section 10: STABILITY AND REACTIVITY**

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : Stable under recommended storage conditions.
Possibility of hazardous reactions : No hazards to be specially mentioned.
Conditions to avoid : Excessive heat.
Incompatible materials : Strong oxidizing agents
Hazardous decomposition : No decomposition if used as directed.
Products
Section 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Product

Acute oral toxicity: No data is available on the product itself.
Acute inhalation toxicity: No data is available on the product itself.
Acute dermal toxicity: No data is available on the product itself.
Skin corrosion/irritation: No data is available on the product itself.
Serious eye damage/eye irritation: No data is available on the product itself.
Respiratory or skin sensitization: No data is available on the product itself.
Germ cell mutagenicity: No data is available on the product itself.
Genotoxicity in vitro: No data is available on the product itself.
Genotoxicity in vivo: No data is available on the product itself.
Carcinogenicity: No data is available on the product itself.
Reproductive toxicity: No data is available on the product itself.
STOT - single exposure assessment: No data is available on the product itself.
STOT - repeated exposure assessment: No data is available on the product itself.
Aspiration toxicity: No data is available on the product itself.

Components:

Highly refined mineral oil:
Carcinogenicity: No data available
Aspiration toxicity: May be fatal if swallowed and enters airways.

Highly refined mineral oil:
Carcinogenicity: No data available
Aspiration toxicity: May be fatal if swallowed and enters airways.

Highly refined mineral oil:
Carcinogenicity: No data available
Aspiration toxicity: May be fatal if swallowed and enters airways.

Carcinogenicity IARC
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Product:
Toxicity to fish : No data is available on the product itself.
Toxicity to daphnia and other aquatic invertebrates : No data is available on the product itself.
Toxicity to algae : No data is available on the product itself.

Persistence and degradability

Product:
Biodegradability : No data is available on the product itself.

Bioaccumulative potential Product:
Bioaccumulation : No data is available on the product itself.
Partition coefficient: n-octanol/water : not determined
Mobility in soil

Product:
Mobility : No data is available on the product itself.

Components:
Highly refined mineral oil: Mobility
Highly refined mineral oil: Mobility
Highly refined mineral oil: Mobility

Results of PBT and vPvB assessment

Product Components
Assessment : No data is available on the product itself.

Highly refined mineral oil:
Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating. Partition coefficient: n-octanol/water : not determined

Highly refined mineral oil:
Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Other adverse effects

Product:
Additional ecological information : None known to be persistent. (vPvB)

Section 13: DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with applicable laws and regulations, and material characteristics at time of disposal

For the safety of persons conducting disposal, recycling or reclamation activities, refer to the information in Section 8, Exposure control and personal protection.
Disposal recommendations

Product : Dispose of contents/container to an approved waste disposal plant.

Empty containers
Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Regulatory disposal information
Waste Classification : The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Section 14: TRANSPORTATION INFORMATION

LAND (DOT)
Proper shipping name: Elevated Temperature Liquid, n.o.s. (Highly refined mineral oil)

<table>
<thead>
<tr>
<th>Class</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>3257</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>Labels</td>
<td>9 (Elevated temperatures.)</td>
</tr>
<tr>
<td>Emergency Response Guidebook</td>
<td>128</td>
</tr>
<tr>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>no</td>
</tr>
</tbody>
</table>

Footnote: The above classification applies if the product is offered for transport at a temperature equal or greater than 100 deg. C (212 deg. F). In containers less than 119 gallons, this product is Not Regulated by DOT. If the product is offered for transport at less than 100 deg. C (212 deg. F), the transport classification is Not Regulated.

SEA (IMDG)
Proper shipping name: Elevated Temperature Liquid, n.o.s. (Highly refined mineral oil)

<table>
<thead>
<tr>
<th>Class</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>3257</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>Labels</td>
<td>9 (Elevated temperatures.)</td>
</tr>
<tr>
<td>EmS Number 1</td>
<td>F-A, S-P</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>no</td>
</tr>
</tbody>
</table>

Note: The above classification applies if the product is offered for transport at a temperature equal or greater than 100 deg. C (212 deg. F). If the product is offered for transport at less than 100 deg. C (212 deg. F), the transport classification is Not Regulated.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks: Not applicable

AIR (IATA)
Proper shipping name: FORBIDDEN FOR AIR TRANSPORT
Note: Product classified as UN 3257 is forbidden by air transport but the product may be transported by air if its temperature is less than 100 deg. C (212 deg. F). If the product is offered for transport at less than 100 deg. C (212 deg. F), the transport classification is Not Regulated.

Section 15: REGULATORY INFORMATION

National chemical inventory status:

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Listed</td>
</tr>
<tr>
<td>DSL</td>
<td>Listed</td>
</tr>
<tr>
<td>AICS</td>
<td>Listed</td>
</tr>
<tr>
<td>NZIoC</td>
<td>Listed</td>
</tr>
<tr>
<td>ENCS</td>
<td>Listed</td>
</tr>
<tr>
<td>KECI</td>
<td>Listed</td>
</tr>
<tr>
<td>PICCS</td>
<td>Listed</td>
</tr>
<tr>
<td>IECSC</td>
<td>Listed</td>
</tr>
<tr>
<td>EINECS</td>
<td>Listed</td>
</tr>
</tbody>
</table>

CERCLA Reportable Quantity

This material is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Contact local authorities to determine if other reporting requirements apply.

SARA 311/312 Hazards : No SARA Hazards

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO – KNOW

SARA 302
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Massachusetts Right To Know

Components
Highly refined mineral oil 64741-89-5

Pennsylvania Right To Know

Components
Highly refined mineral oil 64741-89-5
Highly refined mineral oil 64742-54-7
Highly refined mineral oil 64742-65-0

New Jersey Right To Know

Components
Highly refined mineral oil 64741-89-5
Highly refined mineral oil 64742-54-7
Polyolefin 9003-27-4
Highly refined mineral oil 64742-65-0

California Prop. 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
Section 16: OTHER INFORMATION

Sources of key data used to compile the Safety Data Sheet

- Canadian Controlled Products Regulations
- Canadian Environmental Protection Act (CEPA)
- Canadian Hazardous Products Act
- Canadian National Pollutant Release Inventory (NPRI)
- Canadian Transportation of Dangerous Goods (TDG)
- Canadian Workplace Hazardous Material Information System (WHMIS)
- US American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (exposure limits)
- US California Proposition 65
- US Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- US Department of Health & Human Services. National Toxicology Program
- US Department of Transport DOT 49 CFR
- US Hazardous Material Identification System (HMIS) III
- US National Fire Protection Association (NFPA) 704
- US National Institute for Occupational Safety & Health (NIOSH) (exposure limits)
- US OSHA 29 CFR 1910.1000 - Table Z1 (exposure limits)
- US State Right to Know Acts: Pennsylvania, Massachusetts, New Jersey
- US Superfund Amendments and Reauthorization Act (SARA) 311/312. SARA 313
- US Toxic Substances Control Act (TSCA)
- Infineum studies
- International Agency for Research on Cancer

The information contained in this document is based upon data believed to be reliable and relates only to the matters specifically mentioned in this document. Although Functional Products Inc. has used reasonable skill and care in the preparation of this information, in the absence of any overriding obligations arising under a specific contract, no representation, warranty (express or implied), or guarantee is made as to the suitability, accuracy, reliability or completeness of the information; nothing in this document shall reduce the user's responsibility to satisfy itself as to the suitability, accuracy, reliability, and completeness of such information for its particular use; there is no warranty against intellectual property infringement; and Functional Products Inc. shall not be liable for any loss, damage or injury that may occur from the use of this information other than death or personal injury caused by its negligence.

No statement shall be construed as an endorsement of any product or process. For greater certainty, before use of information contained in this document, particularly if the product is used for a purpose or under conditions which are abnormal or not reasonably foreseeable, this information must be reviewed with the supplier of such information.

Distributed by:

TRiiSO

www.tri-iso.com

Request Quote or Samples