**M-533 FG**

**Anticorrosion Additive for Food Grade Lubricants**

**PRODUCT DESCRIPTION**

M-533 FG is a premium rust inhibitor for petroleum and synthetic lubricants, greases, and rust preventative fluids. It provides excellent demulsibility and filterability and is compatible with a wide range of additives and base stocks. Being NSF HX-1 certified, M-533 FG is permitted for use in food plants where incidental contact with food is expected.

M-533 FG is designed for formulating food grade lubricants that require rust protection, demulsibility, filterability, and water resistance at low treat levels. Although it is approved for use up to 10% if required, M-533 FG passes the ASTM D 6658* rust test in white mineral oil and PAO base oils at 0.10-0.20% additive level.

**TYPICAL APPLICATIONS**

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Typical Treat Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rust Preventive Fluids</td>
<td>3.00-10.0%</td>
</tr>
<tr>
<td>Hydraulic Fluids</td>
<td>0.05-0.5%</td>
</tr>
<tr>
<td>Circulating Oils</td>
<td>0.05-1.0%</td>
</tr>
<tr>
<td>Compressor Oils</td>
<td>0.25-1.0%</td>
</tr>
<tr>
<td>Greases</td>
<td>0.50-3.0%</td>
</tr>
<tr>
<td>Gear Oils</td>
<td>0.10-1.0%</td>
</tr>
</tbody>
</table>

*ASTM D 6658 “Standard Test Method of Rust Preventing Characteristics of Inhibited Mineral Oil in the Presence of Water, Procedure B-Synthetic Sea Water”

**FEATURES**

- Compliance with the Food and Drug Administration Regulation 21 CFR 178.3570
- NSF HX-1 Certified (Incidental contact with food)
- Excellent rust inhibitor
- Outstanding demulsification properties
- Excellent filterability
- Excellent thermal and hydrolytic stability
- Excellent solubility in PAO and white oil base stocks

**METALS PROTECTED**

- Carbon steel
- Stainless steel
- Galvanized steel
- Aluminum
- Brass
- Copper
- Cadmium
- Magnesium
- Silver
- Solder
- Tin
- Lead
- Bronze
- Zinc
- Galvanized steel
- Magnesium
- Lead
- Aluminum
- Silver
- Brass
- Zinc
- Carbon steel
- Stainless steel
- Galvanized steel
- Aluminum
- Brass
- Copper
- Cadmium
- Magnesium
- Silver
- Solder
- Tin
- Lead
- Bronze
- Zinc

**TYPICAL PROPERTIES**

- **Appearance**: Clear brown viscous liquid
- **Weight per gallon**: 7.5-7.7 lb/gal (0.90-0.92 kg/l)
- **Density@ 15.6°C (ASTM D 4052)**: 0.91 g/ml
- **pH**: 7-8 (1% IPA/Water)

**TYPICAL PROPERTIES**

When added at concentration level 3-5% by weight to Hydraulic or Gear oil

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM D 1748</td>
<td>10+ days</td>
</tr>
<tr>
<td>Corrosion Protection in Humidity Cabinet</td>
<td></td>
</tr>
<tr>
<td>ASTM D 1401</td>
<td>Does not cause emulsification</td>
</tr>
<tr>
<td>Water Separability of Petroleum and Synthetic Fluids</td>
<td>Does not affect oil water separability</td>
</tr>
</tbody>
</table>

**SOLUBILITY**

Soluble in petroleum and synthetic lubricant base stocks and most common solvents. Insoluble in water. However, it is recommended to verify the solubility in the base oils used and the compatibility with other additives.
PACKAGING AND STORAGE
M-533 FG is available in 5 gallon (19 liter) plastic pails, 55 gallon (208 liter) metal drums, liquid totes, and bulk.
M-533 FG should be sealed before storage. The shelf life is up to 24 months.

Store in cool, dry place away from direct sources of heat.
Storage maximum temperature 46°C.

FOR INDUSTRIAL USE ONLY
KEEP OUT OF REACH OF CHILDREN
KEEP CONTAINER TIGHTLY CLOSED
NOT FOR INTERNAL CONSUMPTION
CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

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