SUPER MULPUS EX
High flash point bearing cooling oil for machining tools

SUPER MULPUS EX formulated with synthetic oil, despite of its low viscosity oil, has a high flash point of 200 °C or higher and makes it easy to handle dangerous materials. It provides excellent lubricity and cooling properties.

- SPECIAL FEATURES
1. High Flash Point
   SUPER MULPUS EX is a low viscosity product with a flash point of 200 °C or higher.

2. Outstanding Lubricity
   In order to circulate the coolant fluid efficiently and to prevent abnormal wear of the circulating pump, excellent anti-wear performance is required. SUPER MULPUS EX prevents wear of the circulation pump because it has superior anti-wear properties compared to mineral oil-based bearing cooling oil.

3. Good Cooling Performance
   The cooling performance of SUPER MULPUS EX is equivalent to mineral oil-based bearing cooling oil. In addition, SUPER MULPUS EX 5 is recommended for switching from VG 2 mineral oil-based bearing cooling oil.

- APPLICATIONS
   Cooling oil for high speed spindle bearings

- CONTAINERS
   200-liter drums and 20-liter pail cans.

- TYPICAL PROPERTIES OF SUPER MULPUS EX

<table>
<thead>
<tr>
<th>Grades</th>
<th>5</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color (ASTM)</td>
<td>L0.5</td>
<td>L0.5</td>
</tr>
<tr>
<td>Density (15°C)</td>
<td>0.871</td>
<td>0.852</td>
</tr>
<tr>
<td>Kinematic viscosity (40°C)</td>
<td>5.9</td>
<td>9.6</td>
</tr>
<tr>
<td>Kinematic viscosity (100°C)</td>
<td>2.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Viscosity index</td>
<td>214</td>
<td>162</td>
</tr>
<tr>
<td>Flash point (COC)</td>
<td>204</td>
<td>212</td>
</tr>
<tr>
<td>Pour point</td>
<td>-20</td>
<td>-20</td>
</tr>
<tr>
<td>Acid number</td>
<td>0.11</td>
<td>0.11</td>
</tr>
<tr>
<td>Copper strip corrosion (100°C, 3h)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Rust prevention</td>
<td>No rust</td>
<td>No rust</td>
</tr>
</tbody>
</table>

(distilled water, 60°C, 24 h)

Note: The typical properties may be changed without notice. (July, 2019)
### Handling Precautions

Follow these precautions when handling this product.

<table>
<thead>
<tr>
<th>Composition</th>
<th>Base Oil(s), Additives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautionary pictograms:</td>
<td>![Warning Icon]</td>
</tr>
<tr>
<td>Signal word:</td>
<td>Danger</td>
</tr>
<tr>
<td>Hazard Statement:</td>
<td>May be fatal if swallowed and enters airways</td>
</tr>
<tr>
<td></td>
<td>Harmful to aquatic life</td>
</tr>
<tr>
<td></td>
<td>Harmful to aquatic life with long lasting effects</td>
</tr>
<tr>
<td>Precautionary Statements:</td>
<td></td>
</tr>
</tbody>
</table>
  • Do not handle until all safety precautions have been read and understood.  
  • Wear protective gloves/protective clothing/eye protection/face protection.  
  • Do not allow the eyes to become exposed to the product. Do not swallow the product.  
  • Avoid release to the environment.  
  • Wash hands thoroughly after handling.  
  • Do not eat, drink or smoke when using this product.  
  • IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
  • IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
  • If the eyes are exposed to the product: Rinse the eyes with plenty of running water and immediately contact a physician.  
  • IF ON SKIN: Wash with plenty of soap and water.  
  • Do NOT induce vomiting.  
  • The product must be stored in a cool, well-ventilated location where it will not be exposed to direct sunlight.  
  • Containers that have been opened must be tightly sealed.  
  • Store locked up.  
  • Dispose of contents/container in accordance with local/regional/national/international regulations.  
  • If there are any doubts about proper methods of handling the product, contact the point of purchase before proceeding with usage. |