Product Information
Gear fluids for food and beverage processing equipment

**FM GEAR OIL 220** and **460** are anti-wear fluids designed for the lubrication of enclosed gears in the food and beverage processing and packaging industry.

They are based on a careful blend of base fluids and selected additives chosen for their ability to meet the stringent requirements of the food and beverage industry.

Certified by NSF for ISO 21469 and registered by NSF (Class H1) for use where there is potential for incidental food contact. Produced according to FLT Quality Standards, in facilities where HACCP audit and Good Manufacturing Practice have been implemented and form part of the quality and hygiene management systems ISO 9001 and ISO 21469.

**CERTIFICATIONS AND SPECIFICATIONS**
- NSF H1
- NSF ISO 21469
- Kosher
- Halal
- DIN 51517 CLP
- ISO 6743-6 L-CKC
PERFORMANCE FEATURES
• The base fluid has been selected for its ability to provide good lubrication under variety of applications
• Suitable for steel on steel and phosphor-bronze wheel applications
• Good anti-wear and extreme pressure characteristics
• Good anti-oxidant properties, resisting the formation of deposits and sludge at elevated temperatures
• Neutral odour and taste

APPLICATIONS
• Lubrication of enclosed gear boxes used in the food industry
• Also intended for use in equipment manufacturing packaging

APPLICATION TEMPERATURE
0°C bis +110 °C (short peak +120 °C)

SEAL AND PAINT COMPATIBILITY
Compatible with the elastomers, gaskets, seals and paints normally used in food machinery lubrication systems.

HANDLING AND STORAGE
All food grade lubricants should be stored separately from other lubricants, chemical substances and foodstuffs and out of direct sunlight or other heat sources. Store between 0 °C and +40 °C. Provided that the product has been stored under these conditions we recommend to use the product within 5 years from the date of manufacture. Upon opening a pack, the product must be used within 2 years (or within 5 years of date of manufacture, whichever is the sooner).

TYPICAL CHARACTERISTICS (Typical for current production. Variations in these characteristics may occur.)

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>FM GEAR OIL 220</th>
<th>FM GEAR OIL 460</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSF Reg. No.</td>
<td></td>
<td>144715</td>
<td>144716</td>
</tr>
<tr>
<td>Colour</td>
<td></td>
<td>Colourless</td>
<td></td>
</tr>
<tr>
<td>Density at +15 °C</td>
<td>ISO 12185</td>
<td>875</td>
<td>880</td>
</tr>
<tr>
<td>Flashpoint</td>
<td>ISO 2592</td>
<td>265</td>
<td>262</td>
</tr>
<tr>
<td>Pourpoint</td>
<td>ISO 3016</td>
<td>-12</td>
<td></td>
</tr>
<tr>
<td>Kin. Visc. at +40 °C</td>
<td>ISO 3104</td>
<td>220</td>
<td>460</td>
</tr>
<tr>
<td>Kin. Visc. at +100 °C</td>
<td>ISO 3104</td>
<td>20.0</td>
<td>33.0</td>
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<td>Viscosity index</td>
<td>ISO 2909</td>
<td>106</td>
<td>109</td>
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<td>FZG-Test A/8.3/90 Failure Load Stage</td>
<td>ISO 14635-1</td>
<td>&gt;12</td>
<td></td>
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</tbody>
</table>

As far as we know these information reflect the current state of knowledge and our research. They cannot, however, be taken as an assurance about the properties nor as a guarantee of the suitability of the product for the individual case in point. Before using our products the purchaser must, therefore, check the suitability and be satisfied that the output will be satisfactory. Our products are continually being up-dated. We reserve the right, therefore, to alter the information of this product information at any time and without prior announcement. We are specialized in developing products for extreme tribological problems in cooperation with end users. FUCHS LUBRITECH provides service and individual advice. Please contact us!

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