**eni Arnica S FR**

*eni Arnica S FR* are biodegradable synthetic lubricant *Factory Mutual* approved as fire resistant hydraulic fluid, suitable in industrial plant where it is present the risk of fire hazard and environmental pollutions. *eni Arnica S FR* are formulated with organic ester and specific additives (Classification ISO-L-HFDU).

### Characteristics (Typical values)

<table>
<thead>
<tr>
<th>eni Arnica S FR</th>
<th>46</th>
<th>68</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity at 40°C mm²/s</td>
<td>46</td>
<td>68</td>
</tr>
<tr>
<td>Viscosity at 100°C mm²/s</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Viscosity index</td>
<td>-</td>
<td>185</td>
</tr>
<tr>
<td>Flash Point O.C. °C</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Fire Point °C</td>
<td>348</td>
<td>359</td>
</tr>
<tr>
<td>Pour point °C</td>
<td>-30</td>
<td>-30</td>
</tr>
<tr>
<td>Density at 15°C kg/l</td>
<td>0.886</td>
<td>0.899</td>
</tr>
</tbody>
</table>

### PROPERTY AND PERFORMANCE

- *eni Arnica S FR* have an outstanding resistance to be ignited not supporting the combustion process and self-extinguish that reduces the possibility of a fire hazard triggered by hot and molten metals, flame, electric spark when a breakage of hydraulic system take the fluid in contact with those potential fire sources. This property is proved by the *Factory Mutual* approval standard 6930 for Flammability Classification of Industrial Fluids overcoming the *FM spray flammability test*.

- *eni Arnica S FR* are biodegradable over 70% percent according to the OECD 301B test.

- *eni Arnica S FR* have an outstanding anti-wear property overcoming the 12th, stage of FZG machine

- The anticorrosive and antirust properties ensure effective protection and conservation of all metal components of the circuit.

- The very high viscosity index allows to extend the use in a wide temperature range. The anti-corrosive and anti-rust properties allows to keep the metal parts of circuit in good state.

- *eni Arnica S FR* do not produce stable emulsions. Indeed, they separate rapidly from water, which can be drained off from the bottom of the system tank. Hence the presence of water in the circuit is minimized and the continuity of the lubricant film is guaranteed, thus ensuring correct lubrication.
The antifoam properties favour the rapid breakdown of foam and prevent possible malfunctioning of the plant due to this cause.

*eni Arnica S FR* have an outstanding thermal-oxidation resistance tending to minimize polymerisation process keeping constant the main characteristics over a long period as proved by the result of IP 48 test modified.

The good thermal stability prolong the life of product and the replacing costs. In order to guarantee a long life of product, it is a good practice to keep the average temperature of fluid present in reservoir under 70 °C, tolerating a pick of 80 °C for very short period.

In case of accidentally contact with flame, there are not production of toxic gas.

**APPLICATIONS**

*eni Arnica S FR* are suitable in hydraulic circuit open or closed where a risk of fire hazard could occur for the presence of high temperature parts, as rolling mill or in presence of potential fire sources (hot and molten metals, flame, electric spark).

*eni Arnica S FR* are biodegradable and can be used where the environmental pollution can occur.

**SPECIFICATION AND APPROVALS**

*eni Arnica S FR* meets the following requirement and approvals:

- ISO 6743/4 HFDU
- ISO 6743/4 HEES
- ISO 12922  HFDU
- ILVA ST 127 Rev.3 2010
- FM Approvals Class 6930
- VII Report of Luxemburg – HFDU