STAR-LUBE II
Brine lubricant

APPLICATIONS
- Seawater, packer fluids, and brines
- Sodium chloride-based drilling fluid
- Viscous pills

ADVANTAGES
- Performs effectively at low concentration
- Reduces torque and drag
- Is soluble in monovalent and divalent completion brines
- Does not form cheese and grease
- Carries yellow environmental classification (Y1)

LIMITATIONS
- This product is not intended for use with high-density potassium brine

STAR-LUBE II* brine lubricant is designed to be used in brine-based completion fluids to reduce the coefficient of friction. It demonstrates exceptional and stable reduction in metal-to-metal friction when added to a brine-based completion fluid at low concentration. This lubricant is specially formulated to not form emulsion in oil-contaminated brines and the product will not form insoluble grease in the presence of hardness ions.

Toxicity and handling
The Harmonized Offshore Chemical Notification Format (HOCNF) is available on request. Precautions should be taken to prevent entry into eyes and prolonged or repeated contact with the skin. In case of contact with eyes, flush with water. The MSDS should be consulted prior to handling. STAR-LUBE II lubricant does not have a restricted classification for transportation.

Packaging and storage

Typical Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical appearance</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.018</td>
</tr>
<tr>
<td>Pour point</td>
<td>&lt;32 degF [&lt;-0 degC]</td>
</tr>
<tr>
<td>pH</td>
<td>9.0 to 10.5</td>
</tr>
<tr>
<td>Solubility in water, 88 degF [20 deg C]</td>
<td>Complete</td>
</tr>
</tbody>
</table>