**Legend™ LD-8230 Lubricant**

**OVERVIEW**
Legend™ LD-8230 lubricant is a synthetic surfactant suitable for use in all water-based fluids for minimizing friction in metal-on-metal applications.

**APPLICATIONS**
LD-8230 lubricant is appropriate for high pressures and temperatures up to 450°F (232°C). LD-8230 lubricant is effective in low concentrations, can provide extreme pressure (metal-to-metal) and borehole (metal-to-formation) lubricity without having a negative affect on the fluid properties and is moderately tolerant of divalent ions. It is also effective in silicate-based drilling fluids, but is generally not effective in saturated salt systems and brines unless run at greater than 5% by volume.

For normal treatment, add 1-3% by volume to the system to reduce friction. To free stuck pipe, add 3-6% by volume in a slug or sweep treatment.

**Product Specifications**

<table>
<thead>
<tr>
<th>Form</th>
<th>Amber liquid</th>
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<tbody>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>0.99</td>
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<tr>
<td><strong>Density (60°F)</strong></td>
<td>8.2 - 8.3 lbs/gal</td>
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<tr>
<td><strong>Flash Point (SFCC)</strong></td>
<td>&gt;200°F (93°C)</td>
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**FEATURES/BENEFITS**

- Reduces the friction between the drill string and casing or wall cake
- Can be used in extreme and low pressure situations
- Forms a lasting, lubricious film on contact surfaces
- Can be rapidly incorporated into the active mud system
- Immediately minimizes friction on contact
- Does not grease out in aqueous environments with high alkalinity or high divalent ion concentrations
- Helps prevent excessive wear on casing/collars
- Reduces torque and drag in high-angle and S-shaped wells
- Effective in all water-based drilling fluids and stable to 450°F (232°C)
For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com/multichem.