**Shell Alvania Greases EP(LF)**

*General purpose extreme-pressure industrial grease*

<table>
<thead>
<tr>
<th>THICKENER</th>
<th>NLGI</th>
<th>TEMP RANGE</th>
<th>BASE OIL VISCOSITY</th>
<th>EP</th>
<th>WATER RESISTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LITHIUM</td>
<td>00, 0, 1, 2 &amp; 3</td>
<td>-20 °C to +120 °C</td>
<td>40 °C: 189 cSt; 100 °C: 15.6 cSt</td>
<td>✔ ✔</td>
<td>★★</td>
</tr>
</tbody>
</table>

Shell Alvania Greases EP(LF) offer the excellent performance expected of the world's leading brand of grease. They are premier quality, multipurpose, extreme-pressure industrial greases based on a blend of high viscosity index mineral oils and a lithium hydroxystreate soap thickener and contain lead free extreme-pressure and other proven additives.

Shell Alvania Greases EP(LF) are designed for the grease lubrication of rolling element and plain bearings such as those found in the steel, paper, mining, quarrying and construction industries.

### Applications

**Shell Alvania Greases EP(LF) 0 & 00** are specifically designed for:

- Steel mill lubrication where a softer grease is necessary for specialised dispensing systems.
- Heavy duty plain and rolling element bearings operating under severe conditions including shock loading in wet environments
- Gearbox applications where semi-fluid greases are required

**Shell Alvania Grease EP(LF) 1** is designed for:

- Heavy duty bearings served by centralised dispensing equipment
- Extreme-pressure gear grease for applications at normal ambient temperature
- Heavy duty plain and rolling element bearings operating under severe conditions including shock loading in wet environments
- Low temperature greasing applications

**Shell Alvania Grease EP(LF) 2 & 3** are designed for:

- Heavy duty bearings and general industrial lubrication
- Heavy duty plain and rolling element bearings operating under severe conditions including shock loading in wet environments
- Operation over the temperature range -20 °C to 100 °C for bearings operating at 75% of the maximum rated speed (Can withstand up to 120 °C intermittently)

### Performance Features

- **Outstanding load carrying capacity** Shell Alvania Greases EP(LF) contain special extreme-pressure additives which enable them to withstand heavy and shock loads without failure of the lubricant film.
- **Superior mechanical stability** Compared to "leaded" Alvania, the resistance to extended mechanical working is significantly improved. This is particularly important in vibrating environments where poor mechanical stability can lead to grease softening with subsequent loss of lubrication performance and leakage.
• **Excellent resistance to water wash-out**
  Shell Alvania Greases EP(LF) have been formulated to offer much improved levels of resistance to water wash-out compared to the old leaded product.

• **Oxidation stability**
  Specially selected base oil components have excellent oxidation resistance. Their consistency will not alter in storage and they withstand high operating temperatures without hardening or forming bearing deposits.

• **Excellent corrosion protection**
  Shell Alvania Greases EP(LF) have a strong affinity with metal and have the ability to protect bearing surfaces against corrosion, even when the grease is contaminated with water.

---

**Performance Specifications**
Meet the British Timken specification for Steel Mill applications

**Re-greasing Intervals**
For bearings operating near their maximum recommended temperatures, re-greasing intervals should be reviewed.

**Health & Safety**
Shell Alvania Greases EP(LF) are unlikely to present any significant health or safety hazard when properly used in the recommended application, and good standards of industrial and personal hygiene are maintained.

For further guidance on Product Health & Safety refer to the appropriate Shell Product Safety Data Sheet.

---

**Typical Physical Characteristics**

<table>
<thead>
<tr>
<th>Shell Alvania Grease EP(LF)</th>
<th>00</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Soap Type</strong></td>
<td>Lithium</td>
<td>Lithium</td>
<td>Lithium</td>
<td>Lithium</td>
<td>Lithium</td>
</tr>
<tr>
<td><strong>Base Oil</strong></td>
<td>Mineral</td>
<td>Mineral</td>
<td>Mineral</td>
<td>Mineral</td>
<td>Mineral</td>
</tr>
<tr>
<td><strong>Kinematic Viscosity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 40°C cSt</td>
<td>189</td>
<td>189</td>
<td>189</td>
<td>189</td>
<td>189</td>
</tr>
<tr>
<td>@ 100°C cSt</td>
<td>15.6</td>
<td>15.6</td>
<td>15.6</td>
<td>15.6</td>
<td>15.6</td>
</tr>
<tr>
<td>(IP 71/ASTM-D445)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dropping Point</strong></td>
<td>-</td>
<td>-</td>
<td>180</td>
<td>180</td>
<td>180</td>
</tr>
<tr>
<td>°C</td>
<td>(IP 132)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cone Penetration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worked @ 25°C 0.1mm</td>
<td>400-480</td>
<td>355-385</td>
<td>310-340</td>
<td>265-295</td>
<td>220-250</td>
</tr>
<tr>
<td>(IP 50/ASTM-D217)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.