Lubricating greases for long-term lubrication
Lithium lubricating grease ISO L-XDDEB 000, 00, 0, ISO L-XDDHB 1, 2

FOR® PD

FOR® PD lithium lubricating greases, based on mineral oils of high viscosity index and special PD additives. High oxidation stability, good anticorrosion protection and synergistic performance of PD additives make them suitable for long-term lubrication at elevated operating temperatures, in the presence of moisture and other unfavourable working conditions. Grease composition provides smooth structure, good mechanical stability and good rheological properties that makes them suitable for use at max speeds up to 15000 r/min.

ADVANTAGES
• Excellent EP and antiwear properties for longer time period.
• Excellent mechanical and colloidal stability.
• Very high degree of protection of the lubricating assembly block from corrosion and rust.
• Good lubricity for increased loads over a long period of time.
• Good tackiness, on contact surfaces it forms the film of exceptional resistance to high pressures.
• Good rheological properties.
• Good thermal stability, resulting in high resistance to temperature variations.
• Excellent pumpability for longer distances.
• Compatible with Li lubricating greases

QUALITY LEVEL
ISO 6743-9: L-X DDEB 000, 00, 0
ISO 6743-9: L-X DDHB 1, 2
DIN 51 502: KP 000N-40, KP 00N-40, KP 0N-40
DIN 51 502: KP 1N-40, KP 2N-40

SCOPE OF APPLICATION
• Motor vehicles
• Construction, agricultural, mining machinery
• Transport devices
• Rolling mill stands
• Other industries where lubricating grease is required for life lubrication of bearings.

APPLICATION
• It is applied for long life lubrication of roller and sliding bearings where due to their construction, change and refilling of lubricant is not anticipated.
• Lubrication of bearings in conditions of high speeds, increased contact pressures, loads and vibrations.
• Lubrication of rolling and sliding bearings at rotary excavators, stackers, inter-loaders, conveyor belts, reducers exposed to impact loads, bearings on woodworking machines, grinding spindle bearings.
• Lubrication of bearings of electric motors, bearings of motor vehicles, bearings with change of direction of rotation or rotary movement, trimmer heads, reducer transmisions.
• Lubrication of rotary spindles, joints, bearings with rotating outer ring and high stress due to centrifugal load, bearings in steel mills.
• Lower grades are used for the lubrication of low speed reducer transmissions as well as for the lubrication in central systems with long pipelines.
• Good lubrication effects are achieved in bearings with maximum number of revolutions of \( n = 15 \, 000 \) r/min and for maximum values of \( D_{xn} = 1 \, 600 \, 000 \).

• Temperature range of application: \(-40^\circ\text{C} \) to \(+140^\circ\text{C}\)

**TYPICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>units</th>
<th>VALUES</th>
<th>methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR® PD</td>
<td>-</td>
<td>000 00 0 1 2</td>
<td>-</td>
</tr>
<tr>
<td>Colour</td>
<td>-</td>
<td>brown</td>
<td>visual</td>
</tr>
<tr>
<td>Soap type/ Thickener</td>
<td>-</td>
<td>Lithium soap</td>
<td>-</td>
</tr>
<tr>
<td>NLGI grade</td>
<td>-</td>
<td>000 00 0 1 2</td>
<td>DIN 51 818</td>
</tr>
<tr>
<td>Working penetration at 25°C , 60 cycles</td>
<td>mm/10</td>
<td>420 370 320 280 235</td>
<td>SRPS ISO 2137</td>
</tr>
<tr>
<td>Change of penetration at 25°C, 10 000 cycles</td>
<td>%</td>
<td>- - 7 8 5</td>
<td>SRPS ISO 2137</td>
</tr>
<tr>
<td>Dropping point</td>
<td>°C</td>
<td>150 160 170 180 190</td>
<td>SRPS ISO 2176</td>
</tr>
<tr>
<td>Kinematic viscosity of base oil at 40°C</td>
<td>mm²/s</td>
<td>ca 100</td>
<td>ca 140</td>
</tr>
<tr>
<td>Water resistance, 90 °C</td>
<td>rating</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>EMCOR test, 168h dist. water</td>
<td>rating</td>
<td>-</td>
<td>0/0</td>
</tr>
<tr>
<td>Average wear diameter</td>
<td>mm</td>
<td>0,40 0,45</td>
<td>ASTM D 2266</td>
</tr>
<tr>
<td>Weld load</td>
<td>N</td>
<td>2500 3150</td>
<td>ASTM D 2596</td>
</tr>
<tr>
<td>Temperature of application</td>
<td>°C</td>
<td>-40 to +140</td>
<td></td>
</tr>
</tbody>
</table>

**STORAGE**

Store in a covered area, protected from direct influence of sun and moisture, away from the ignition source. Recommended storage temperature: -5°C to +25°C.

All necessary instructions can be found in the product SDS. It contains the details of possible hazards, warnings and first aid measures, as well as the impact on the environment and the necessary measures for the storage and handling.

**PACKING**

Cans (0.8 and 20) kg and tin drums of 180 kg

Data are orientational, manufacturer reserves the right to make changes in order to improve product quality.