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AF2

Anti-Fretting Corrosion Grease

AF2

CAT-57146
IKO Anti-Fretting Corrosion Grease AF2

If a short stroke or small oscillation are given in large number of times, lubricant may driven out from the contact surfaces of rolling element and raceway, and wears having red rust colored particles may occur. It is called fretting corrosion or false brinelling, which can give serious influence to machine’s performance and accuracy.

AF2 grease is an Anti-Fretting Corrosion Grease consists of synthetic base oil and urea type thickener. This grease is suitable to very short stroke application that general grease cannot be used.

**AF2 Grease**

JG80 / AF2 in bellows container (80g)

MG2.5 / AF2 in miniature greaser (2.5ml)

**Features**

1. Superior Anti-Fretting Corrosion performance realizes very short stroke application in safety.
2. Wide operation temperature range (good for -50°C to 170°C)
3. Rolling resistance is very stable and the fluctuation by operation speed can be minimized.
4. Superior oxidation stability because no metallic soap base is used.

**Base properties**

<table>
<thead>
<tr>
<th>Test item and condition</th>
<th>Representative value</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Light brown</td>
<td></td>
</tr>
<tr>
<td>Base oil</td>
<td>Synthetic oil</td>
<td></td>
</tr>
<tr>
<td>Thicker</td>
<td>Urea</td>
<td>JIS K 2220</td>
</tr>
<tr>
<td>Worked penetration (25°C)</td>
<td>298 g</td>
<td>JIS K 2220</td>
</tr>
<tr>
<td>Dropping point (°C)</td>
<td>250 or over</td>
<td>JIS K 2220</td>
</tr>
<tr>
<td>Oil separation (mass %)</td>
<td>(100°C, 24h) 2.0</td>
<td>JIS K 2220</td>
</tr>
<tr>
<td>Oxidation stability (kPa)</td>
<td>(85°C, 100h) 30</td>
<td>JIS K 2220</td>
</tr>
<tr>
<td>Working stability (100000 times)</td>
<td>340</td>
<td>JIS K 2220</td>
</tr>
<tr>
<td>Corrosion prevention on bearings (52°C, 48h)</td>
<td>Passed</td>
<td>ASTM D 1743</td>
</tr>
<tr>
<td>Base oil kinematic viscosity (mm²/s) (40°C)</td>
<td>25</td>
<td>JIS K 2283</td>
</tr>
</tbody>
</table>

**Anti-fretting durability test**

- Test piece: LWHS 35
- Stroke length: 3 mm
- Number of stroke per minute: 300 min⁻¹
- Total number of stroke: 3.6 x 10⁶ (20 hours)
- Maximum compressive stress: 1695 MPa
- Initial grease amount: 0.5 g (per one circulation cycle)

**Profile of raceway surface**

**Before testing**

**AF2 grease**

**After testing**

**Rolling resistance**

- Test piece: LWHD 28 with Ti preload
- Initial grease amount: 1.1 g (per one circulation cycle)

**Caution**

- When handling grease, put on goggles or face shield for eye protection and gloves to avoid skin contact.
- Contact with grease may cause inflammation. If swallowed, rinse mouth. Avoid exposure to water and gas media attention immediately. Ingestion: Do not induce vomiting and get medical attention immediately.
- After handling grease, wash skin with a plenty of soap. Do not expose greases to high temperature, because it is a flammable item. Flash point 200°C (392°F)
- Storage: Put on the cap tight. Avoid exposure to sunlight and high temperatures. Keep it in a cool and dark place.
- Disposal method: Dispose it according to the applicable regulations.

[Linear Motion Rolling Guide with pre-packed AF2 grease can be delivered on request. Please consult to IKO.]