**Product Information**

**High Performance Lubricants**

**Molykote® 33 Extreme Low Temperature Bearing Grease,**

**Molykote® 41 Extreme High Temperature Bearing Grease,**

**Molykote® 44 High Temperature Bearing Grease**

**FEATURES**

- Resistance to oxidation, moisture and corrosive atmospheres
- Inertness
- Good shear stability
- Wide service temperature range:
  - 33 Extreme Low Temperature Grease: -100 to 400°F (-73 to 204°C)
  - 41 Extreme High Temperature Grease: 0 to 550°F (-18 to 288°C)
  - 44 High Temperature Grease: -40 to 400°F (-40 to 204°C)
- Compatible with many plastics

**USES**

All three Molykote® Bearing Grease are used to lubricate ball bearings operating under light to moderate loads. These can be used for:

**Molykote® 33 Extreme Low Temperature Bearing Grease**
- Freezer cart casters and cold room conveyor equipment
- Utility disconnect switch contacts
- Plastic electric clock motors
- Maximum-demand meters, power-factor meters, watt-hour meters
- Windshield wiper motor gears
- Photographic, optical and surveying equipment
- Oscillographs, geophysical and light, low-torque instruments
- Starter clutch drives

**Molykote® 41 Extreme High Temperature Bearing Grease**
- Antifriction bearings of high-temperature equipment
- Oven conveyor bearings
- Wheel bearings of core oven carts
- Governor linkage of steam turbines
- Ball and socket connections of power insulators

**Molykote® 44 High Temperature Bearing Grease**
- Kiln preheater fans, oven fans, radiator cooling fans
- Textile slashers and driers
- Aircraft engine
- Conveyor systems

These greases do not soften or affect most plastics and are used to lubricate plastic gears, bearings and cams, as well as metal and rubber parts. Because of low torque requirements, Molykote® 33 Extreme Low Temperature Bearing Grease is especially effective in equipment that must start in extreme cold.

**Oxidation Resistance** – Molykote® Bearing Greases are recommended for use in units that must remain operable when subjected not only to low and high operating temperatures, but also to severe weathering and oxidation.

**COMPOSITION**

- Lithium soap
- Phenylmethyl silicone oil
**TYPICAL PROPERTIES**

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

<table>
<thead>
<tr>
<th>Method</th>
<th>Test Description</th>
<th>33 Light</th>
<th>33 Medium</th>
<th>41 Grease</th>
<th>44 Light</th>
<th>44 Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN 51 562</td>
<td>Base Oil Viscosity @ 25°C, mm2/s</td>
<td>100</td>
<td>100</td>
<td>316</td>
<td>125</td>
<td>125</td>
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<tr>
<td>ASTM D 217</td>
<td>Penetration, worked 60 strokes, mm</td>
<td>320</td>
<td>280</td>
<td>280</td>
<td>300</td>
<td>280</td>
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<tr>
<td>NLGI #</td>
<td></td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>-1</td>
<td>2</td>
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<tr>
<td>DIN 51 350 pt4</td>
<td>4 ball weld load, N (kg)</td>
<td>1200 (122)</td>
<td>1200 (122)</td>
<td>1500 (152)</td>
<td>1100 (113)</td>
<td>1100 (113)</td>
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<tr>
<td>Max Dn Value1 (Bore Size in mm X rpm)</td>
<td></td>
<td>250,000</td>
<td>200,000</td>
<td>75,000</td>
<td>350,000</td>
<td>300,000</td>
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<tr>
<td>DIN 51 2265</td>
<td>Drop Point Degrees C (F)</td>
<td>226 (439)</td>
<td>226 (439)</td>
<td>&gt;300 (&gt;572)</td>
<td>220 (432)</td>
<td>220 (432)</td>
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<tr>
<td>Fed Std 791</td>
<td>Bleed after 24 hrs @149°C (300°F) %</td>
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<td>1</td>
<td>4.8 3</td>
<td>2.5</td>
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<tr>
<td>DIN 51 817</td>
<td>Oil Separation (Standard Test, 7 days at 40°C) %</td>
<td>3.2</td>
<td>1.6</td>
<td>2.6</td>
<td>2.4</td>
<td>1.4</td>
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<td>Specific Gravity @25°C (77°F)</td>
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<td>0.97</td>
<td>0.97</td>
<td>1.14</td>
<td>1.05</td>
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<td>ASTM D 1478-80</td>
<td>Low Temperature Torque @ -73°C</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Initial Break-away Torque, Nm</td>
<td></td>
<td>130 x 10^{-3}</td>
<td>164 x 10^{-3}</td>
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<tr>
<td>Torque after 20 minutes running time, Nm</td>
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<td>13 x 10^{-3}</td>
<td>22 x 10^{-3}</td>
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<td></td>
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<tr>
<td>Low Temperature Torque @ -40°C</td>
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<tr>
<td>Initial Break-away Torque, Nm</td>
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<td>225 x 10^{-3}</td>
<td>336 x 10^{-3}</td>
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<tr>
<td>Torque after 20 minutes running time, Nm</td>
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<td>60 x 10^{-3}</td>
<td>124 x 10^{-3}</td>
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<td>DIN 51 808</td>
<td>Oxidation Resistance, pressure drop 100hr, 99°C (210°F) bar (psi)</td>
<td>0.4 (5.80)</td>
<td>0</td>
<td>0.1 (1.45)</td>
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<td>DIN 51 821-02-A</td>
<td>FAG Rolling Element Bearing Tester, FE9, 1500/6000-150, Fpm, Hrs</td>
<td>110</td>
<td>110</td>
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</table>

1 Maximum Dn values are approximations and will vary widely with temperature, load and bearing type.
2 Estimated service temperature range based on product formulation and laboratory testing. Actual service temperature range is dependent on other factors including the specific application environment.
3 Values are at 392°F (200°C).

Specification Writers: Please obtain copies of the Dow Corning Sales Specifications for these products and use them as a basis for your specifications. They may be obtained from any Dow Corning Sales Office, or from Dow Corning Customer Service in Midland, MI. Call (989) 496-6000.

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**Figure 1. Suggested Product Temperature Range Recommendations**
DESCRIPTION
Molykote® 33 Extreme Low Temperature Bearing Grease, Molykote® 41 Extreme High Temperature Bearing Grease and Molykote® 44 High Temperature Bearing Grease are silicone lubricating oils with thickeners added. Molykote® 33 Extreme Low Temperature Bearing Grease and Molykote® 44 High Temperature Bearing Grease are thickened with a special lithium soap; Molykote® 41 Extreme High Temperature Bearing Grease is thickened with carbon black.

Molykote® 33 Extreme Low Temperature Bearing Grease and Molykote® 44 High Temperature Bearing Grease are available in light and medium consistencies – NLGI #1 and #2. Molykote® 41 Extreme High Temperature Bearing Grease is available in a medium consistency – NLGI #2.

LISTINGS/ SPECIFICATIONS
Molykote® 33 Extreme Low Temperature Bearing Grease is USDA listed for use as a lubricant where there is no possibility of food contact.

HOW TO USE
Conventional grease application methods – brushing, grease gun or automatic application – are suitable for use with these Molykote® Bearing Greases. Laboratory tests and field reports indicate that “heavy duty” guns available from such manufacturers as Lincoln-St. Louis are preferred.

Note: Extra care should be taken at all times to prevent dirt from contaminating the lubricant. These greases should be packed with a clean metal or ebonite spatula.

LIMITATIONS
These greases should not be applied to surfaces that are to be painted. These greases should not be used with highly loaded ferrous metal bearing combinations, especially where sliding friction is encountered.

Molykote® 41 Extreme High Temperature Bearing Grease – Bearings operating at extremely high temperatures need to be frequently monitored to ensure that the grease has not dried out. If this occurs, more grease can be added, or the existing grease rejuvenated by adding Dow Corning® 710 Fluid.

These products are neither tested nor represented as suitable for medical or pharmaceutical uses.

SHIPPING LIMITATIONS
None.

USABLE LIFE AND STORAGE
When stored at or below 90°F (32°C), Molykote® 33 Extreme Low Temperature Bearing Grease, Molykote® 41 Extreme High Temperature Bearing Grease and Molykote® 44 High Temperature Bearing Grease have a shelf life of 60 months from date of manufacture. Refer to product packaging for “Use By” date.

PACKAGING
Not all sizes available in all geographies.

Molykote® 33 Extreme Low Temperature Bearing Grease is supplied in 100-g tubes, 150-g tubes, 400-g cartridges, 1-kg cans, 3.6-kg cans, 18-kg pails, 25-kg pails, 55-kg drums, and 180-kg drums.

Molykote® 41 Extreme High Temperature Bearing Grease is supplied in 100-g tubes, 150-g tubes, 400-g cartridges, 1-kg cans, 3.6-kg cans, 5-kg pails, 18-kg pails, 25-kg pails, and 181.4-kg drums.

Molykote® 44 High Temperature Bearing Grease is supplied in 100-g tubes, 150-g tubes, 400-g cartridges, 3.6-kg cans, 5-kg pails, 18-kg pails, 25-kg pails, and 180-kg drums.

HANDLING PRECAUTIONS
Product safety information required for safe use is not included. Before handling, read product and safety data sheets and container labels for safe use, physical and health hazard information. The material safety data sheet is available on the Dow Corning website at www.dowcorning.com. You can also obtain a copy from your local Dow Corning sales representative or Distributor or by calling your local Dow Corning Global Connection.

HEALTH AND ENVIRONMENTAL INFORMATION
To support Customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, www.dowcorning.com or consult your local Dow Corning representative.
LIMITED WARRANTY
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