

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

COMPOSITION

- Lithium soap
- Phenylmethyl silicone oil

Lubricants for antifriction bearings and plastic and rubber parts

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.

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.

Method	Test	Results				
		33 Light	33 Medium	41 Grease	44 Light	44 Medium
DIN 51 562	Color	Off White	Off White	Black	Off White	Off White
	Thickner	Lithium Soap	Lithium Soap	Carbon Black	Lithium Soap	Lithium Soap
	Base Oil	Silicone	Silicone	Silicone	Silicone	Silicone
	Base Oil Viscosity @ 25°C, mm2/s	100	100	316	125	125
ASTM D 217	Penetration, worked 60 strokes, mm	320	280	280	300	280
	NLGI #	1	2	2	~1	2
DIN 51 350 pt4	4 ball weld load, N (kg)	1200 (122)	1200 (122)	1500 (152)	1100 (113)	1100 (113)
	Max Dn Value ¹ (Bore Size in mm X rpm)	250,000	200,000	75,000	350,000	300,000
	Service Temperature ² Degrees C (F)	-73 to 204 (-100 to 400)	-73 to 204 (-100 to 400)	-18 to 288 (0 to 550)	-40 to 204 (-40 to 400)	-40 to 204 (-40 to 400)
ASTM D 2265	Drop Point Degrees C (F)	226 (439)	226 (439)	>300 (>572)	220 (432)	220 (432)
Fed Std 791	Bleed after 24 hrs @ 149°C (300°F) %	2	1	4.8 ³	2.5	2
DIN 51 817	Oil Separation (Standard Test, 7 days at 40°C) %	3.2	1.6	2.6	2.4	1.4
	Specific Gravity @25°C (77°F)	0.97	0.97	1.14	1.05	1.05
ASTM D 1478-80	Low Temperature Torque @ -73°C					
	Initial Break-away Torque, Nm	130 x 10 ⁻³	164 x 10 ⁻³			
	Torque after 20 minutes running time, Nm	13 x 10 ⁻³	22 x 10 ⁻³			
	Low Temperature Torque @ -40°C					
	Initial Break-away Torque, Nm				225 x 10 ⁻³	336 x 10 ⁻³
	Torque after 20 minutes running time, Nm				60 x 10 ⁻³	124 x 10 ⁻³
DIN 51 808	Oxidation Resistance, pressure drop 100hr, 99°C (210°F) bar (psi)			0.4 (5.80)	0	0.1 (1.45)
DIN 51 821-02-A	FAG Rolling Element Bearing Tester, FE9, 1500/6000-150, F ₅₀ , Hrs				110	110

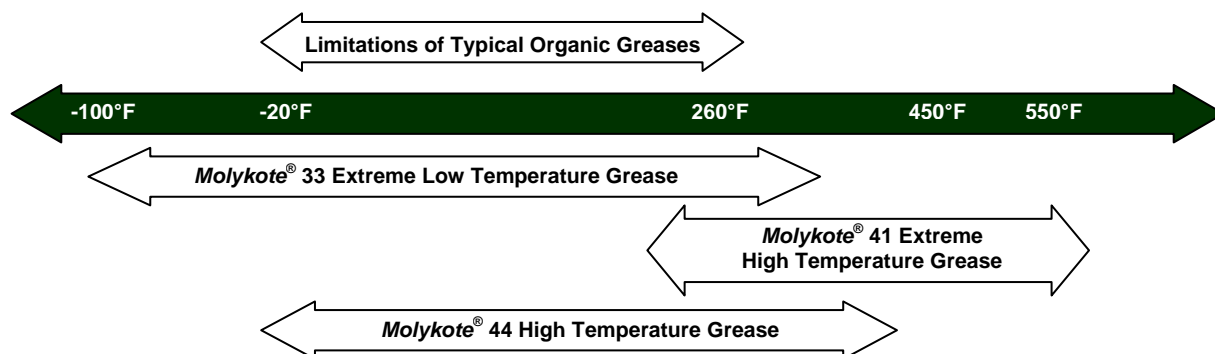
¹Maximum Dn values are approximations and will vary widely with temperature, load and bearing type.

²Estimated service temperature range based on product formulation and laboratory testing. Actual service temperature range is dependent on other factors including the specific application environment.

³Values 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.

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
INFORMATION - PLEASE
READ CAREFULLY**

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Dow Corning's products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that the product will meet the Dow Corning sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

**DOW CORNING SPECIFICALLY
DISCLAIMS ANY OTHER
EXPRESS OR IMPLIED
WARRANTY OF FITNESS FOR A
PARTICULAR PURPOSE OR
MERCHANTABILITY.**

**DOW CORNING DISCLAIMS
LIABILITY FOR ANY
INCIDENTAL OR
CONSEQUENTIAL DAMAGES.**

We help you invent the future.™

www.dowcorning.com