

Product Information High Performance Lubricants

DOW CORNING

Molykote[®] 33 Extreme Low Temperature Bearing Grease, *Molykote*[®] 41 Extreme High Temperature Bearing Grease, *Molykote*[®] 44 High Temperature Bearing Grease

FEATURES & BENEFITS

- Resistance to oxidation, moisture and corrosive atmospheres
- Inertness
- Good shear stability
- Wide service temperature range:
Molykote[®] 33 Extreme Low Temperature Grease: -100 to 356°F (-73 to 180°C)
Molykote[®] 41 Extreme High Temperature Grease: 0 to 550°F (-18 to 288°C)
Molykote[®] 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

APPLICATIONS

All three *Molykote*[®] Bearing Greases 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.

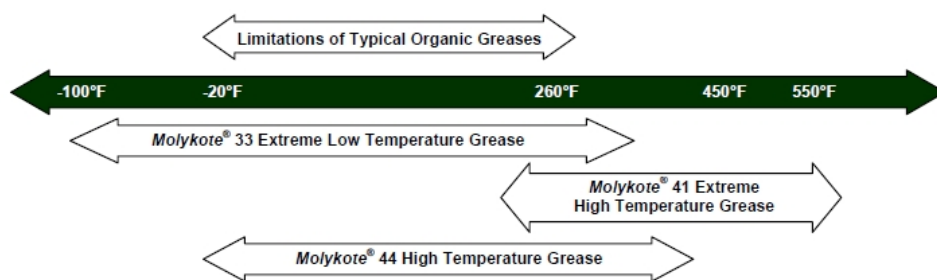
Test	Property	Results				
		<i>Molykote</i> [®] 33 Light	<i>Molykote</i> [®] 33 Medium	<i>Molykote</i> [®] 41 Grease	<i>Molykote</i> [®] 44 Light	<i>Molykote</i> [®] 44 Medium
	Color	White to off-white	White to off-white	Black	White to off-white	White to off-white
	Thickener	Lithium Soap	Lithium Soap	Carbon Black	Lithium Soap	Lithium Soap
	Base Oil	Silicone	Silicone	Silicone	Silicone	Silicone
DIN 51 562	Base Oil Viscosity @ 25°C, mm ² /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 180 (-100 to 356)	-73 to 180 (-100 to 356)	-18 to 288 (-0 to 550)	-40 to 204 (-40 to 400)	-40 to 240 (-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 hours @ 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 100 hours, 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 , Hours				110	110

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

²Estimated service temperature range is 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).

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.

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.

HANDLING

PRECAUTIONS

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL 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 DOWCORNING.COM, OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

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 INFORMATION

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.

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.

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, 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 our 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 our products will meet the 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.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

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