

Specialty Lubricants

***Dow Corning*[®] 33 Extreme Low Temperature Bearing Grease, *Dow Corning*[®] 41 Extreme High Temperature Bearing Grease, *Dow Corning*[®] 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)

COMPOSITION

- Thickened silicone oil

Lubricants for antifriction bearings and plastic and rubber parts

USES

All three *Dow Corning* Bearing Greases are used to lubricate ball bearings operating under light to moderate loads. These can be used for:

***Dow Corning* 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

***Dow Corning* 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
- Knife-type electric power disconnect switches
- Ball and socket connections of power insulators
- Aircraft turbine engines

***Dow Corning* 44 High Temperature Bearing Grease**

- Kiln preheater fans, oven fans, radiator cooling fans
- Textile slashers and driers
- Aircraft engines
- 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, *Dow Corning* 33 Extreme Low Temperature Bearing Grease is especially effective in equipment that must start in extreme cold.

Oxidation Resistance – *Dow Corning* 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

These values are not intended for use in preparing specifications.

Method	Test	Result					
		<i>Dow Corning 33</i> Extreme Low Temperature Bearing Grease		<i>Dow Corning 41</i> Extreme High Temperature Bearing Grease		<i>Dow Corning 44</i> High Temperature Bearing Grease	
		<u>Light</u> Pink/Gray ¹ Lithium Soap	<u>Medium</u> Pink/Gray ¹ Lithium Soap	Black Carbon Black	<u>Light</u> Brown/Amber Lithium Soap	<u>Medium</u> Brown/Amber Lithium Soap	
ASTM D 217	Color						
	Thickener						
	Penetration, worked 60 strokes	320	280	280	300	280	
	NLGI Number	1	2	2	~1	2	
	Bleed, after 24 hr at 300°F (149°C), percent	2	1	4.8 ²	2.5	2	
ASTM D 2265	Evaporation, after 24 hr at 300°F (149°C), percent	2.4	2.8	2.5 ²	1.3	2	
	Dropping Point, °F (°C)	439 (226)	439 (226)	>570 (300)	432 (220)	432 (220)	
ASTM D 2596	Temperature Range ³ , °F (°C)	-100 to 400 (-73 to 204)	-100 to 400 (-73 to 204)	0 to 550 (-18 to 288)	-40 to 400 (-40 to 204)	-40 to 400 (-40 to 204)	
	Specific Gravity at 77°F (25°F)	0.97	0.97	1.14	1.05	1.05	
	4-Ball Weld Load, N	1200	1200	-	1100	1100	
ASTM D 2596	Base Oil Viscosity, SUS at 100°F	355	355	1740	390	390	
	Max Dn Value ⁴ (Bore Size in mm x rpm)	250,000	200,000	75,000	350,000	300,000	

¹The dye changes color on standing; this color change does not affect the serviceability of the grease.

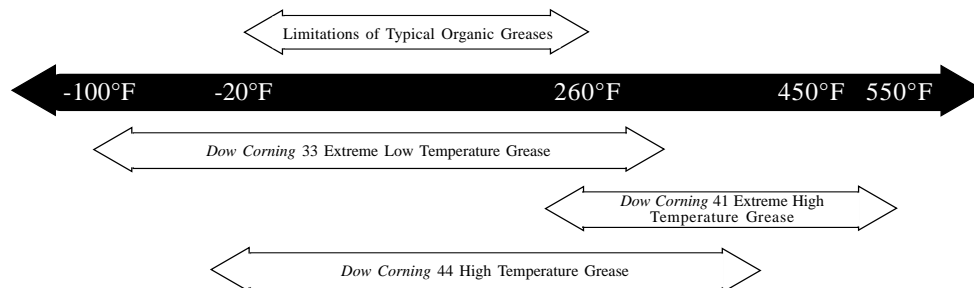
²Values are at 392°F (200°C).

³Estimated service temperature range based on product formulation and laboratory testing. Actual service temperature range is dependent on other factors including the specific application environment.

⁴Maximum Dn values are approximations and will vary widely with temperature, load and bearing type.

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

Dow Corning 33 Extreme Low Temperature Bearing Grease, *Dow Corning 41 Extreme High Temperature Bearing Grease* and *Dow Corning 44 High Temperature Bearing Grease* are silicone lubricating oils with thickeners added. *Dow Corning 33 Extreme Low Temperature Bearing Grease* and *Dow Corning 44 High Temperature Bearing Grease* are thickened with a special lithium soap; *Dow Corning 41 Extreme High Temperature Bearing Grease* is thickened with carbon black.

Dow Corning 33 Extreme Low Temperature Bearing Grease and *Dow Corning 44 High Temperature Bearing Grease* are available in light and medium consistencies – NLGI

#1 and #2. *Dow Corning 41 Extreme High Temperature Bearing Grease* is available in a medium consistency – NLGI #2.

LISTINGS/ SPECIFICATIONS

Dow Corning 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 *Dow Corning 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.

USE 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.

Dow Corning 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.

STORAGE AND SHELF LIFE

When stored at or below 90°F (32°C), *Dow Corning 33 Extreme Low Temperature Bearing Grease*, *Dow Corning 41 Extreme High Temperature Bearing Grease* and *Dow Corning 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

Dow Corning 33 Extreme Low Temperature Bearing Grease is supplied in 5.3-oz (150-g) tubes, 14.1-oz (400-g) cartridges, 8-lb (3.6-kg) cans, 40-lb (18.1-kg) pails and 400-lb (181.4-kg) drums.

Dow Corning 41 Extreme High Temperature Bearing Grease is supplied in 5.3-oz (150-g) tubes,

Figure 1: Percent Volume Change of Various Rubbers in *Dow Corning 33 Extreme Low Temperature Bearing Grease*

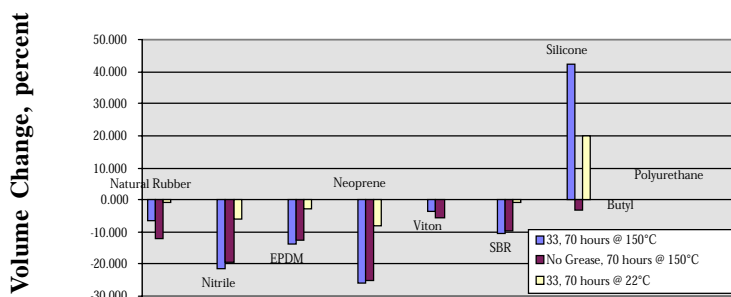
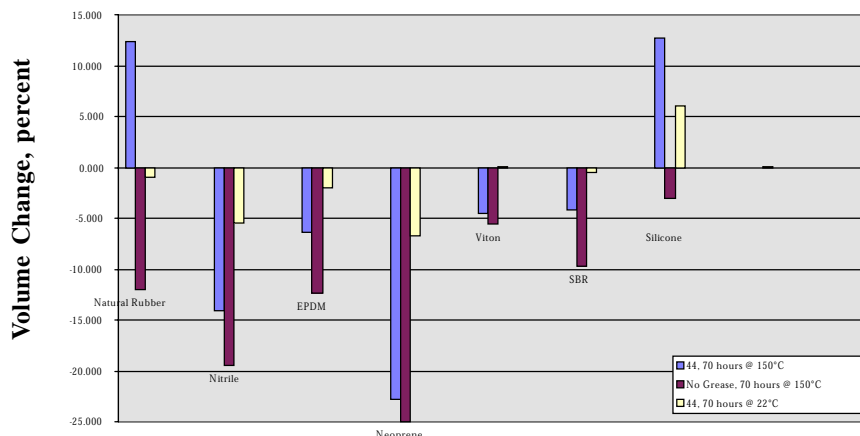


Figure 2: Percent Volume Change of Various Rubbers in *Dow Corning 44 High Temperature Bearing Grease*



14.1-oz (400-g) cartridges, 8-lb (3.6-kg) cans and 40-lb (18.1-kg) pails.

Dow Corning 44 High Temperature Bearing Grease is supplied in 5.3-oz (150-g) tubes, 14.1-oz (400-g) cartridges (medium consistency only), 8-lb (3.6-kg) cans, 40-lb (18.1-kg) pails and 400-lb (181.4-kg) drums.

SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. 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 FROM YOUR DOW CORNING REPRESENTATIVE, OR DISTRIBUTOR, OR BY WRITING TO DOW CORNING CUSTOMER SERVICES, OR BY CALLING (989) 496-6000.

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.

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