Grease Compatibility

	615	622	625	629	630	635	638
Aluminum Complex	A	C	A	I	A	A	A
Barium Complex	C	I	C	C	C	C	C
Calcium Stearate	C	I	C	I	C	C	C
Calcium 12 Hydroxy	A	C	A	A	A	A	A
Calcium Complex	I	I	I	C	I	I	I
Calcium Sulfonate	C	A	C	I	C	C	C
Clay Non-Soap	I	I	I	A	I	I	I
Lithium Stearate	A	I	A	I	A	A	A
Lithium 12 Hydroxy	A	I	A	I	A	A	A
Lithium Complex	C	C	C	I	C	C	C
Polyurea, Conventional	I	I	I	I	I	I	I
Polyurea, Shear Stable	C	C	C	I	C	C	C

Key

- **C** Compatible. Grease may be installed directly.
- **A** Acceptable. Grease normally. Re-grease if oil bleed in 24 hrs.
- **I** Incompatible. Old grease must be purged.

Functions of a Lubricant:

- Separation of Parts
- Reduction of Heat
- Contamination Control
- Corrosion Prevention
- Reduce Component Wear
- Support Load

Chesterton ISO certificates available on chesterton.com/corporate/iso

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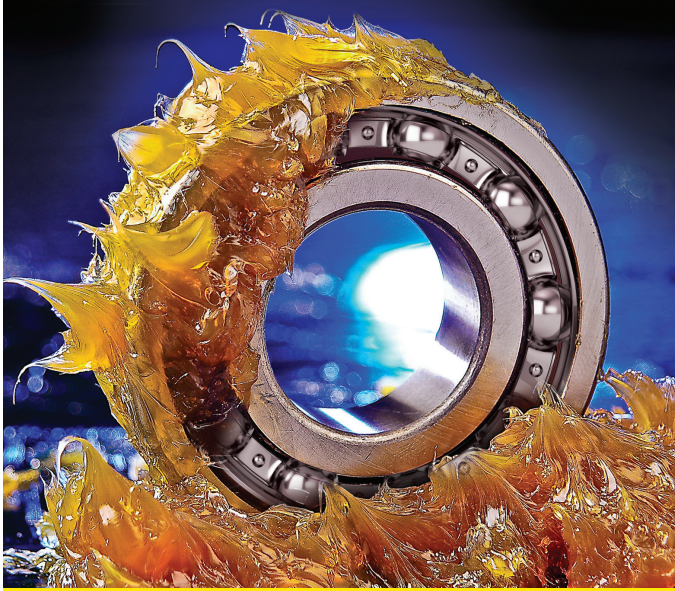
Form No. EN25661 Bearing Reliability Pocket Guide – English 11/26

Bearing Lubrication Quick Reference Guide

- Selection
- Quantity
- Frequency
- Compatibility



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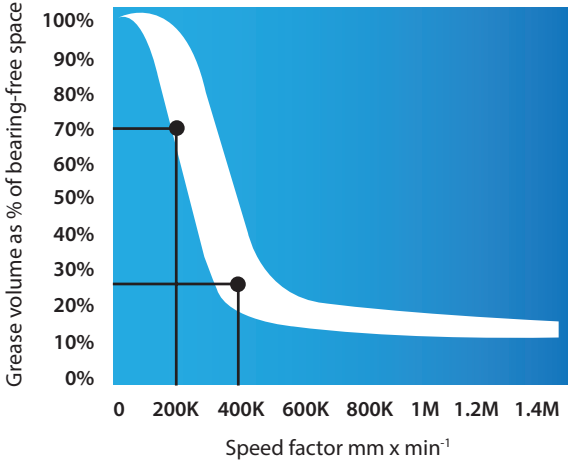
Initial Fill of Bearing - % Free Space

Grease quantity as a percentage of bearing free space at various speed factors.

Photo courtesy of SKF USA Inc.



Initial Fill of Housing

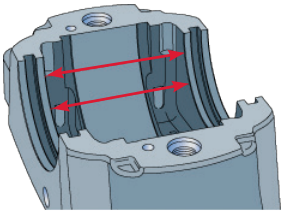


Photo courtesy of SKF USA Inc.

Lubricating from side:
Fill 40% of housing

Lubricating from center:
Fill 20% of housing

For highly contaminated environments or slow speeds:
Fill up to 80% of housing

Grease Quantity for Refilling

Re-greasing volume based on bearing size and service intervals, for ideal conditions.

For a specific application, use *Re-Greasing Frequency Chart*.

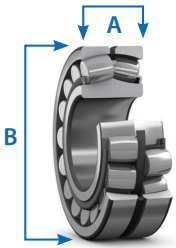


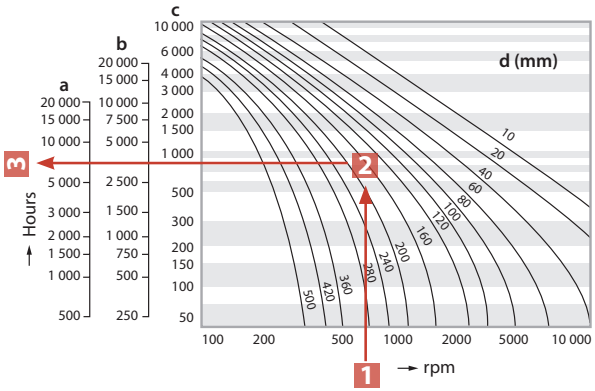
Photo courtesy of SKF USA Inc.

Quantity in grams (g) = B x A x 0.005

If only bearing housing dimensions are known, grams can be estimated by quantity in grams (g) = (W x L)/3 x 0.005

Re-Greasing Frequency

1. Select RPM
2. Select shaft diameter
3. Frequency/Bearing Type—Hours
4. Adjust for Application
   Adjusted Frequency = Value 3 x Correction Factor (Cf)



a radial ball bearings

b cylindrical roller bearings, needle roller bearings

c spherical roller bearings, taper roller bearings, thrust ball bearings

d bearing bore diameter

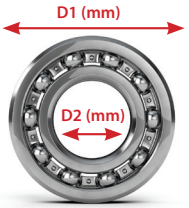
Note: Values are based on 60°C (140°F). For increased temperature above 60°C (140°F), reduce 50% for every 10°C (50°F) increase.

Grease Correction Factor by Application

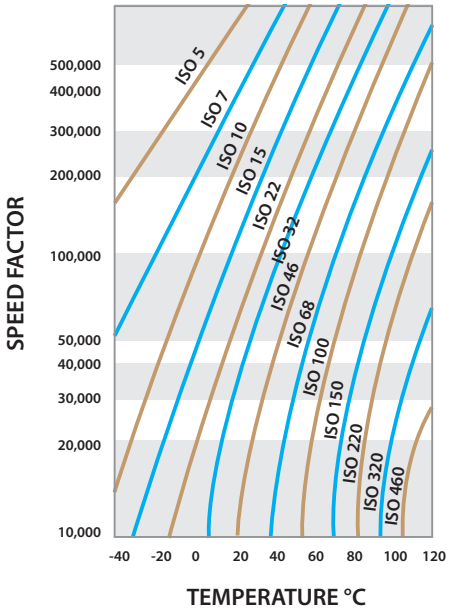
Equipment	Service Conditions	Correction Factor (Cf)
Electric Motors-Horizontal, High Speed Spindles, Machining Centers	Clean, Dry, No Load and Vibration	0.9-1.0
Fans, Blowers-Horizontal, Mixers-Sealed, Split Case Pumps-Sealed Railway	Clean, Dry, Slight Vibration, Slight Dust/Dirt	0.7-0.8
Hammer Mills, Pulverizers, Cranes, Pulleys/Drum, Agitators, Mixers-Horizontal Electric Motors-Mining	High Humidity, Moderate Load and Vibration, Light Dust/Dirt	0.5-0.6
Electric Motors-Belt Drive Cooling Tower, Fin Fans, Paper Machine-Dryers, Stock Chest, Washers, Sag/Ball Mills, Kilns Drives	Occasionally Wet, Moderate Load and Vibration, Moderate Dust/Dirt pH 5-8	0.3-0.4
Agitators, Mixers-Vertical, Belt and Screw Press, Centrifuges, Slurry Pumps, Electric Motors-Vertical, Food Packaging Machinery	Always Wet, Moderate Load and Vibration, Start and Stop pH <4 or >10	0.2-0.3
Belt Conveyors, Paper Machine-Wet End Mining, Construction Equipment Vibrating Motors, Screen	Water Spray, Heavy Load and Vibration, Heavy Abrasive Dust/Dirt	0.1

Speed Factor Determination

Speed Factor, NDm =
RPM x (D1+D2)/2



Base Oil Viscosity Determination



Grease Selection Guide

Chesterton Grease	ISO	NDm*	Temp	Water	Load	Oil Bleed	Electric Motors
615#1, 615#2	100	0.7 - 3.0	B	A	A	A	C
615#2-460	460	<0.5	B	A	A	A	NR
622	100	0.5 - 3.0	B	B	B	B	B
625	100	0.7 - 3.0	B	A	A	A	C
629	200	0.5 - 3.0	A	B	C	A	B
630	46	1.5 - 8.0	A	A	A	A	A
635	100	1.5 - 5.0	A	A	A	A	A
638-46	46	1.5 - 8.0	A	A	A	A	A
638-100	100	1.5 - 5.0	A	A	A	A	A

***NDm X 100K, A=Best B=Good C=Fair NR= Not Recommend**

Chesterton Grease	Operating Temperature	DN (Speed Factor)	NLGI #
630, 635, 638-100, 638-46	-34 to 37°C (-30 to 100°F)	0 - 75,000	1
		75,000 - 150,000	2
		150,000 - 300,000	2
615, 622, 625	-34 to 65°C (0 to 150°F)	0 - 75,000	2
		75,000 - 150,000	2
		150,000 - 300,000	3
629, 630, 635, 638-100, 638-46	37 to 135°C (100 to 275°F)	0 - 75,000	2
		75,000 - 150,000	3
		150,000 - 300,000	3

Please contact Chesterton Application Engineering for NLGI #3.

NLGI depends on other factors as well, including bearing type, thickener type, base oil viscosity, and base oil type.