

MATRIX[®] LC CALCIUM SULFONATE GREASE

Matrix[®] LC is a heavy-duty addition to the Whitmore line of extreme pressure greases. This grease answers demands for a calcium sulfonate complex grease that is pumpable in cold weather and is suitable for higher speed bearings.

When formulating Matrix[®] LC, Whitmore chemists started with Matrix[®] EP, which has been our flagship grease for several years. Several changes were made, including the use of a new polymer. All of the most notable benefits of Matrix[®] EP were retained in Matrix[®] LC including long life, outstanding wear protection, and excellent water resistance. Needless to say, the rust protection afforded by the calcium sulfonate thickener remains.

All grades of Matrix[®] LC contain SL-Tech[™], a proprietary solid lubricant that has been proven to provide outstanding extreme pressure protection. Matrix[®] 5M LC 2 also contains additional protection in the form of 5% molybdenum disulfide, making it ideal for bearings on heavily loaded equipment such as Draglines, Electric Shovels, Hydraulic Shovels, earthmoving equipment, etc.

BENEFITS:

- LONG LIFE - reduced re-lubrication frequency.
- WATER RESISTANT - does not deteriorate when exposed to water.
- SEALING EFFECT - keeps water from entering the bearing.
- WIDE SPEED RANGE - recommended for use in electric motor bearings as well as slower-moving bearings and bushings.

APPLICATIONS:

Besides electric motor bearings, Matrix[®] LC is recommended for use in bearings exposed to water, including water that is alkaline or acidic. It may also be used in applications where re-lubrication is infrequent.

This grease is suitable for highly loaded applications such as Draglines, Electric Shovels, Steel Mill Roll Stands and slew ring bearings on hydraulic Shovels.

Matrix[®] LC 1 is recommended for single-point and centralized lubrication systems such as Lincoln, Graco, Farval, Vogel, etc.

ASTM #	Grade Name	TYPICAL CHARACTERISTICS			
		LC Winter	LC 1	LC 2	5M LC 2
D-217	Penetration Range	390-410	310-340	285-315	285-315
D-2265	Dropping Point, °F (°C)	540 (282)	540 (282)	>540 (282)	>540 (282)
Gardner Method	Density, lb/gal @ 60°F (15.5°C)	8.13	8.17	8.17	8.17
	Specific Gravity, g/cc @ 60°F (15.5°C)	0.9800	0.9809	0.9809	0.9809
D-2596	Four Ball EP, Weld Point, kg	620	800	800	800
D-2266	Four Ball Wear, Scar Width, mm	0.47	0.48	0.48	0.48
D-4049	Water Spray Off, % Loss	Not Reported	Not Reported	<20	<20
D-1264	Water Washout, % Loss	Not Reported	<5	<3	<3
FTM 321.2	Screen Bleed, % Loss @ 30 hrs.	Not Reported	Not Reported	<1	<1
D-1743	Rust Test	Pass	Pass	Pass	Pass
D-4048	Copper Strip Corrosion 212°F (100°C) @ 3 hrs.	1B	1B	1B	1B
	Thickener Type	Calcium Sulfonate Complex	Calcium Sulfonate Complex	Calcium Sulfonate Complex	Calcium Sulfonate Complex
	Operating Temperature Range, °F	-30 to 32	-22 to 400	10 to 400	10 to 400
	Operating Temperature Range, °C	-34 to 0	-30 to 204	-12 to 204	-12 to 204

The above are average values. Minor variations which do not affect product performance are to be expected in normal manufacturing.

PACKAGING

Drums	Kegs	Pails	Cartridges 50 Per Case
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