



# TECHNICAL DATA SHEET

## MATRIX<sup>®</sup> LC CALCIUM SULFONATE GREASE

Matrix<sup>®</sup> 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<sup>®</sup> LC, Whitmore chemists started with Matrix<sup>®</sup> 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<sup>®</sup> EP were retained in Matrix<sup>®</sup> LC including long life, outstanding wear protection, and excellent water resistance. Needless to say, the rust protection afforded by the calcium sulfonate thickener remains.

### 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<sup>®</sup> 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 steel mill roll stands and slew ring bearings on hydraulic shovels.

Matrix<sup>®</sup> LC is recommended for single-point and centralized lubrication systems such as Lincoln, Graco, Farval, Vogel, etc.

ASTM #	Grade	TYPICAL CHARACTERISTICS		
		Winter	1	2
D-217	Penetration Range	390-410	310-340	285-315
D-2265	Dropping Point, °F (°C)	540 (282)	540 (282)	>540 (282)
D-445	Kinematic Viscosity (Base Oil) cSt @ 40°C cSt @ 100°C	105.15 8.02	119.61 10.07	119.61 10.07
D-445	Kinematic Viscosity (Base Oil w/Polymer) cSt @ 40°C cSt @ 100°C	-- --	480 33	480 33
Gardner Method	Density, lb/gal @ 60°F (15.5°C) Specific Gravity, g/cc @ 60°F (15.5°C)	8.13 0.9800	8.17 0.9809	8.17 0.9809
D-2596	Four Ball EP, Weld Point, kg	620	800	800
D-2266	Four Ball Wear, Scar Width, mm	0.47	0.48	0.48
D-4049	Water Spray Off, % Loss	Not Reported	Not Reported	<20
D-1264	Water Washout, % Loss	Not Reported	<5	<3
FTM 321.2	Screen Bleed, % Loss @ 30 hrs	Not Reported	Not Reported	<1
D-1743	Rust Test	Pass	Pass	Pass
D-4048	Copper Strip Corrosion 212°F (100°C) @ 3 hrs	1B	1B	1B
	Thickener Type	Calcium Sulfonate Complex	Calcium Sulfonate Complex	Calcium Sulfonate Complex
OEM Standard	Low Temperature Pumpability Lincoln Ventmeter @ 400 psi, °F (°C)	-30 (-34)	-5 (-21)	24 (-4)
	Operating Temperature Range, °F (°C)	-30 (-34) to 32 (0)	-22 (-30) to 400 (204)	10 (-12) to 400 (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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### THE WHITMORE MANUFACTURING COMPANY

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