



TECHNICAL DATA SHEET

MATRIX® HIGH PERFORMANCE GREASE

Matrix® is highly recommended for difficult applications such as extreme pressure, water, heat, or chemical attack.

The thickener system in Matrix® has a protective effect similar to that of molybdenum disulfide, protecting equipment from wear under difficult conditions of extreme load.

Matrix® helps neutralize acids and also resists reacting with caustic materials. Matrix® grease has prevented corrosion despite years of exposure to phosphoric acid.

A continuous temperature of 400°F (200°C) is within its safe range. It can withstand 550°F (288°C) continuously, provided the bearing is replenished every 30 minutes with normal quantities of grease. Occasional temperature spikes to 600°F (315°C) can be sustained for 5 to 10 minute periods without melting or carbonizing.

Matrix® is suitable for use in Caterpillar equipment under the category of "Water and Temperature Resistant Grease".

Matrix® EP 2 is manufactured to NLGI grade 1.5 for use at a broad range of bearing speeds up to DN 300,000. Matrix® TK 2 (NLGI grade 2) is designed for slower moving bearings up to 150,000 DN.

Matrix® EP 2 is the preferred grade for electric motor bearings.

Ford Tox # 165359

BENEFITS:

- LONG LIFE - reduced relubrication frequency.
- WATER RESISTANT - does not deteriorate when water (including treated water) enters the body of the grease.
- WIDE SPEED RANGE - recommended for use in electric motor bearings as well as slow moving bearings and bushings.

APPLICATIONS:

Water / chemicals: Phosphate processing, suction and wet end rolls on paper machines, outdoor cranes and ship lifts, boat trailer wheel bearings and other marine applications.

Highly Loaded Equipment: Pellet mills, shaker screens, belt conveyor pulleys, slewing bearings, pin and bushing, centrifuges, hammer mills, sealed work roll bearings, fan bearings and many others.

High Temperature Applications: Tenter frame bearings (plastic and textile industries), oven conveyor bearings, plastic extruder bearings, rotary unions on roto-molders.

Because the tendency to bleed oil is very low, Matrix® grease is highly recommended for mechanical couplings and single point automatic lubricators.

Matrix® is suitable for wheel bearings, chassis and U-joints on all vehicles including trucks, construction and mining equipment.

ASTM #	Grade	TYPICAL CHARACTERISTICS			
		EP0	EP 1	EP 2	TK 2
D-217	Penetration Range	355-385	315-345	285-315	270-300
D-2265	Dropping Point, °F (°C)	>500 (260)	>500 (260)	>500 (260)	>500 (260)
D-445	Kinematic Viscosity (Base Oil with Polymer)				
	cSt @ 40°C	78	150	150	320
	cSt @ 100°C	7.5	12.1	12.1	24.0
Gardner Method	Density, lb/gal @ 60°F (15.5°C)	8.0	8.0	8.17	8.30
D-2509	Specific Gravity, g/cc @ 60°F (15.5°C)	0.96	0.96	0.98	1.00
D-2596	Timken OK Load, lb	Not Tested	50	55	55
D-2596	Four Ball EP, Weld Point, kg	400	800+	800+	800+
D-2266	Four Ball Wear, Scar Width, mm	0.50	0.48	0.45	0.45
D-1264	Water Washout, % Loss	1	--	1	--
D-3527	Wheel Bearing Life Test, hrs of life	NA	NA	260	NA
D-1743	Rust Test	Pass	Pass	Pass	Pass
	Thickener Type	Calcium Sulfonate	Calcium Sulfonate	Calcium Sulfonate	Calcium Sulfonate
	Color	Green	Green	Green	Green
OEM Standard	Low Temperature Pumpability Lincoln Ventmeter @ 400 psi, °F (°C)	-20 (-29)	12 (-11)	Not Tested	Not Tested

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

930 Whitmore Drive • P.O. Box 9300 • Rockwall, Texas 75087 • USA • (972) 771-1000 • Fax: (972) 722-2108

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Performance Under Pressure Since 1893

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