



TECHNICAL DATA SHEET

MATRIX[®] HIGH PERFORMANCE GREASE

Matrix[®] is a calcium sulfonate complex grease that 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[®] EP 2 is manufactured to NLGI grade 1.5 for use at a broad range of bearing speeds up to DN 200,000. 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.

Matrix[®] 5M EP 2 is designed primarily for earthmoving equipment and other heavy-duty rolling stock applications. Matrix[®] 5M EP 2 contains 5% solid lubricants.

Matrix[®] meets the Bucyrus International specification for multi-purpose grease (SD 4711)

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: Oven conveyor bearings, plastic extruder bearings, rotary unions on roto-molders.

Automotive and Earthmoving Applications: Wheel bearings, U-joints, ball joints, pin-and-bushing pivot points and slewing bearings.

ASTM #	Grade	TYPICAL CHARACTERISTICS				
		EP 0	EP 1	EP 2	TK 2	5M EP 2
D-217	Penetration Range	355-385	315-345	285-315	270-300	265-295
D-2265	Dropping Point, °F (°C)	>500 (260)	>500 (260)	>500 (260)	>500 (260)	>550 (288)
D-445	Kinematic Viscosity (Base Oil w/Polymer)					
	cSt @ 40°C	130.0	500.0	500.0	--	185.0
	cSt @ 100°C	12.0	31.0	31.0	--	15.4
Gardner Method	Density, lb/gal @ 60°F (15.5°C)	8.00	8.00	8.17	8.30	8.89
	Specific Gravity, g/cc @ 60°F (15.5°C)	0.96	0.96	0.98	1.00	1.068
D-2509	Timken OK Load, lb	Not Tested	50	55	55	Not Tested
D-2596	Four Ball EP					
	Weld Point, kg	500	800+	800+	800+	800
	Load Wear Index	68	70	70	70	Not Tested
D-2266	Four Ball Wear, Scar Width, mm	0.50	0.48	0.45	0.45	0.42
D-1264	Water Washout, % Loss	1	--	1	1	1
D-3527	Wheel Bearing Life Test, hrs of life	NA	NA	260	NA	Not Tested
D-1743	Rust Test	Pass	Pass	Pass	Pass	Pass
OEM Standard	Low Temperature Pumpability					
	Lincoln Ventmeter @ 400 psi, °F (°C)	-20 (-29)	12 (-11)	34 (1)	70 (21)	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

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