

Product Data Sheet



Matrix[®] EP **EXTREME-SERVICE GREASE**

Whitmore[®] 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 and slow speed. This grease helps neutralize acids and also resists reacting with caustic materials. Matrix grease has prevented corrosion despite years of exposure to phosphoric acid fumes.

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 meets the Bucyrus International specification for multipurpose grease (SD 4711). It also meets the following standards per DIN 51502: KP2R -20.

Andritz Separation, Inc. of Arlington, Texas has issued an approval of Whitmore Matrix EP Grease for use in the automatic lubrication systems of their tilting pan filters.



Matrix EP 2 is the preferred grade for electric motor bearings. Matrix EP 2 may be used at DN speeds up to 250,000.

APPLICATION:

- **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, hammermills, 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, Ujoints, ball joints, pin-and-bushing pivot points and slewing bearings

BENEFITS:

- **LONG LIFE** - reduced relubrication frequency
- **WATER RESISTANT** - seals out water, even in under water applications
- **WIDE SPEED RANGE** - recommended for use in electric motor bearings as well as slow moving bearings and bushings

ASTM #	TYPICAL CHARACTERISTICS			
	Grade	EP 0	EP 1	EP 2
D-217	Penetration Range	355-385	310-340	265-295
D-2265	Dropping Point, °F (°C)	460 (238)	500 (260)	500 (260)
D-445	Kinematic Viscosity (Base Oil)			
	cSt @ 40°C	125	125	125
	cSt @ 100°C	12	12	12
D-445	Kinematic Viscosity (with Polymer)			
	cSt @ 40°C	800	800	800
	cSt @ 100°C	47	47	47
D-2596	Four Ball EP Weld Point, kg	500	800	800
D-2266	Four Ball Wear, Scar Width, mm	0.60	0.60	0.45
D-4049	Water Spray-Off, % Loss	--	--	<1
D-1264	Water Washout-Off, % Loss	--	<2	<2
D-1743	Rust Test	Pass	Pass	Pass
	Thickener Type	Calcium Sulfonate	Calcium Sulfonate	Calcium Sulfonate
OEM Standard	Low Temperature Pumpability Lincoln Ventmeter @ 400 psi, °F (°C)	-20 (-29)	12 (-11)	34 (1)

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Learn more
whitmores.com/products/matrix-ep





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