TECHNICAL DATA SHEET

MATRIX® EP and TK

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 and slow speed.

Matrix® 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 may be used at DN speeds up to 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® EP 2 meets the Bucyrus International specification for multi-purpose grease (SD 4711). It also meets the following standards per DIN 51502: KP2R -20.

BENEFITS:

- LONG LIFE - reduced relubrication frequency.
- WATER RESISTANT - seals out water, even in underwater applications.
- 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-busing pivot points and slewing bearings.

ASTM #		TYPICAL CHARACTERISTICS			
	Grade	EP 0	EP 1	EP 2	TK 2
D-217	**Penetration Range**	355-385	310-340	265-295	265-295
D-2265	**Dropping Point**, °F (°C)	520 (270)	520 (270)	520 (270)	520 (270)
D-445	**Kinematic Viscosity** (Base Oil w/Polymer) cSt @ 40°C cSt @ 100°C	 130.0 12.0	 500.0 31.0	 500.0 31.0	 582.4 47.0
D-445	**Kinematic Viscosity** (Base Oil) cSt @ 40°C cSt @ 100°C	 73.0 7.5	 130.0 12.0	 130.0 12.0	 -- --
D-2509	**Timken OK Load**, lb	Not Tested	50	55	55
D-2596	**Four Ball EP** Weld Point, kg Load Wear Index	 500 68	 800+ 70	 800+ 70	 800+ 70
D-2266	**Four Ball Wear,** Scar Width, mm	0.50	0.48	0.45	0.45
FTM 321.2	**Screen Bleed**, % Loss	Not Tested	Not Tested	<1	Not Tested
D-1264	**Water Washout**, % Loss	1	--	1	1
D-3527	**Wheel Bearing Life Test,** hrs of life	NA	NA	260	NA
D-1743	**Rust Test**	Pass	Pass	Pass	Pass
OEM Standard	**Low Temperature Pumpability** Lincoln Ventmeter @ 400 psi, °F (°C)	 -20 (-29)	 12 (-11)	 34 (1)	 70 (21)

PACKAGING

Drums	Kegs	Pails	Cartridges 50 Per Case

For warranty information, scan the QR code.
You can also email us at sales@whitmores.com
Or write to the Sales Department at the address below.

930 Whitmore Drive • Rockwall, Texas 75087 • USA • (972) 771-1000 • 800-699-6318
An ISO 9001 and ISO 14001 registered company • www.whitmores.com