



WHEN DEMANDING GREASE APPLICATIONS NEED THE BEST, CHOOSE MATRIX®.

MATRIX® EP, MATRIX® M

Matrix extreme service greases protect in difficult applications and conditions with capabilities that exceed conventional greases. Matrix protects against heat, high load, corrosion and infrequent lubrication. Matrix can extend lubrication frequency resulting in less grease consumption while still preventing premature wear.

EXTREME-SERVICE GREASES

Matrix® EP (Extreme Service - Calcium Sulfonate Complex Grease)

Matrix EP is an exceptional grease for demanding applications. It's formulated to offer optimal wear protection, even when subjected to adverse conditions such as water washout, elevated temperatures and attack from process chemicals. Ideal for low speeds and extreme loads, the thickener in Matrix EP protects against wear and damage due to shock loads similar to molybdenum disulfide. It also neutralizes acids and other caustic chemicals - it has even been proven to prevent corrosion caused by acid fumes. Matrix EP offers outstanding water washout performance.

Matrix EP2 meets the Bucyrus International specification for multi-purpose 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 Matrix EP for use in the automatic lubrication systems of their tilting pan filters.

Applications — Heavily loaded bearings, bearings- bushings- gates and slides subjected to water submersion, equipment exposed to an acidic or alkaline environment, high temperatures up to 400°F / 200°C and infrequently lubricated bearings.

Matrix EP2 may be used at DN speeds up to 250,000 and is the preferred grade for electric motor bearings.

ASTM #	Typical Characteristics			
	Grades	EP0	EP1	EP2
D-217	Penetration Range	355-385	310-340	265-295
OEM Standard	Low Temperature Pumpability	-20 (-29)	12 (-11)	34 (1)
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

Matrix® M (Extreme Service - Calcium Sulfonate Complex Grease with Moly)

Matrix® M is very similar to Matrix EP in performance and application use. However, Matrix M has the added benefit of containing molybdenum disulfide. The addition of molybdenum disulfide can improve the lubricating capacity of grease which strengthens the grease film and provides additional extreme pressure protection.

Matrix M EP2 meets the Bucyrus International specification for multi-purpose grease (SD 4711). Grades 1 and 2 meet standards KPOR -20, KP1R-20 and KP2R-10 per DIN 51502.

Applications — Heavily loaded bearings, bearings- bushings- gates and slides subjected to water submersion, equipment exposed to an acidic or alkaline environment, high temperatures up to 400°F / 200°C and infrequently lubricated bearings.

ASTM #	Typical Characteristics		
	Grades	EP1	EP2
D-217	Penetration Range	310-340	265-295
OEM Standard	Low Temperature Pumpability	12(-11)	34 (1)
D-2596	Four Ball EP, Weld Point, kg	800	800
D-2266	Four Ball Wear, Scar Width, mm	0.44	0.50



- **Reduced re-lubrication frequency**
- **Wide speed range**
- **Superior wear protection**
- **Excellent water resistance**



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