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 conveyer 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.

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### TYPICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>ASTM #</th>
<th>Grade</th>
<th>Penetration Range</th>
<th>Kinematic Viscosity (Base Oil w/Polymer)</th>
<th>Kinematic Viscosity (Base Oil)</th>
<th>Timken OK Load, lb</th>
<th>Four Ball EP</th>
<th>Four Ball Wear, Scar Width, mm</th>
<th>Screen Bleed, % Loss</th>
<th>Water Washout, % Loss</th>
<th>Wheel Bearing Life Test, hrs of life</th>
<th>Rust Test</th>
<th>Low Temperature Pumpability</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-217</td>
<td>EP 0</td>
<td>355-385</td>
<td>130.0</td>
<td>73.0</td>
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<td>500</td>
<td>0.50</td>
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<td>NA</td>
<td>Pass</td>
<td>-20 (-.29)</td>
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<tr>
<td>D-2265</td>
<td>EP 1</td>
<td>310-340</td>
<td>500.0</td>
<td>130.0</td>
<td>50</td>
<td>800+</td>
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<td>NA</td>
<td>Pass</td>
<td>12 (-11)</td>
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<tr>
<td>D-445</td>
<td>EP 2</td>
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<td>130.0</td>
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<tr>
<td>D-2509</td>
<td>TK 2</td>
<td>285-295</td>
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<td>47.0</td>
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<td>800+</td>
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<td>1</td>
<td>NA</td>
<td>Pass</td>
<td>70 (21)</td>
</tr>
</tbody>
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### PACKAGING

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
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