



## MAGNA <sup>™</sup> SYN EP INDUSTRIAL GEAR OIL

**Magna Syncon EP Industrial Gear Oil** is a premium quality, synthetic, extreme pressure industrial gear lubricant developed for the lubrication of enclosed gear drives and heavily loaded plain or rolling-element bearings operating at extreme temperatures or in severe service. It is suitable for use over a wider temperature range than conventional mineral oil-based gear oils. It meets the performance requirements of major gear drive manufacturers. Syncon EP Industrial Gear Oil is formulated with synthetic polyalphaolefin (PAO) base oils, a viscosity modifier, and a non-chlorinated extreme-pressure additive package. It has outstanding oxidation resistance and thermal stability at high temperatures to help minimize deposit formation and provide long service life. It has high load carrying capacity for protection against scuffing and wear, protects against rust and corrosion, and is resistant to excessive foaming that can interfere with proper lubrication. It has a high viscosity index and low pour point for use in equipment operating at extreme temperatures or over a very wide temperature range.

### Applications

- Heavily loaded enclosed gear drives, such as those found in mine hoists and mining machinery.
- Enclosed industrial gear drives operating at very low or very high temperatures, or operating continuously at higher than normal operating temperatures.
- Heavily loaded plain and rolling-element bearings operating at extreme temperatures.
- Applications where the equipment manufacturer recommends a high VI, synthetic, extreme-pressure gear oil.

### Specifications:Meets

- ANSI/AGMA Standard 9005-F16, Anti-Scuff Lubricants (AS)
- DIN 51517 Part 3, Lubricating Oils, Type CLP HC
- German Steel Industry SEB 181226, Type CLP HC
- ISO 12925-1:1996, Type L-CKC
- Joy Machinery Specification TO-SHEP (ISO VG 320), TO-SMEP (ISO VG 220)
- U.S. Steel 224

### Features/Benefits

- Outstanding oxidation resistance and thermal stability at high temperatures
- Outstanding low-temperature properties
- High viscosity index and low pour point for use over wide temperatures
- Excellent extreme-pressure properties
- Protection against scuffing and wear
- Protects against rust, corrosion, and foaming
- Non-chlorinated additive system • Suitable for year-round use
- Extended service intervals compared to mineral oil-based gear oils



## Typical characteristics

| MAGNA SYN EP INDUSTRIALGEAR OIL                    | ISO | 150       | 220       | 320       | 460       | 680       |
|----------------------------------------------------|-----|-----------|-----------|-----------|-----------|-----------|
| AGMA Grade (obsolete)                              |     | 4 EP      | 5 EP      | 6 EP      | 7 EP      | 8 EP      |
| AGMA Classification                                |     | AS        | AS        | AS        | AS        | AS        |
| Specific Gravity @ 60°F                            |     | 0.861     | 0.865     | 0.866     | 0.87      | 0.875     |
| Density, lbs/gal @ 60°F                            |     | 7.17      | 7.2       | 7.21      | 7.24      | 7.29      |
| Color, ASTM D1500                                  |     | 1         | 1         | 1         | 1         | 1         |
| Flash Point (COC), °C (°F)                         |     | 249 (480) | 249 (480) | 249 (480) | 249 (480) | 249 (480) |
| Pour Point, °C (°F)                                |     | -49 (-56) | -49 (-56) | -44 (-47) | -47 (-53) | -42 (-44) |
| Viscosity                                          |     |           |           |           |           |           |
| cSt @ 40°C                                         |     | 150       | 220       | 320       | 460       | 680       |
| cSt @ 100°C                                        |     | 20.9      | 27.5      | 35.3      | 47.6      | 64.4      |
| SUS @ 100°F                                        |     | 769       | 1134      | 1660      | 2392      | 3549      |
| SUS @ 210°F                                        |     | 105       | 135       | 170       | 230       | 311       |
| Viscosity Index                                    |     | 163       | 161       | 156       | 162       | 166       |
| Acid Number, ASTM D974, mg KOH/g                   |     | 0.76      | 0.76      | 0.76      | 0.76      | 0.76      |
| Copper Corrosion, ASTM D130, 48 hrs @ 80°C         |     | 1a        | 1a        | 1a        | 1a        | 1a        |
| Four-Ball EP, ASTM D2783, Weld Load, kgf           |     | 315       | 315       | 315       | 315       | 315       |
| Four-Ball Wear Test, ASTM D4172, Scar Diameter, mm |     | 0.45      | 0.45      | 0.45      | 0.45      | 0.45      |
| FZG Scuffing Test, ASTM D5182, Failure Load Stage  |     | >12       | >12       | >12       | >12       | >12       |
| Oxidation Stability, ASTM D2893B                   |     |           |           |           |           |           |
| Viscosity Increase @ 121°C, %                      |     | <6        | <6        | <8        | <10       | <10       |

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.