

MEROPA ELITESYN[™] XM ISOCLEAN[®] CERTIFIED LUBRICANT

150, 220, 320, 460, 680

PRODUCT DESCRIPTION

Meropa EliteSynTM XM ISOCLEAN[®]
Certified Lubricants are premium, highperformance synthetic gear oils,
offering maximum efficiency, reduced
operating temperatures, long lubricant life and robust
micropitting wear protection. They are designed for use
in industrial and marine gear systems, where extreme
load and shock load protection is required. Chevron
ISOCLEAN Certified Lubricants have been certified to
meet specified ISO Cleanliness standards at point of
delivery using industry leading filtration and testing
technology. ISOCLEAN Certified products are the first
step for contamination control and maximizing
component life.

CUSTOMER BENEFITS

Meropa EliteSyn XM ISOCLEAN Certified Lubricants deliver value through:

- Ready to use Enables users to meet stringent original equipment manufacturers' cleanliness standards for fill lubricants.
- **Flexibility** ISO Cleanliness targets can be customized to fit your business application needs.
- Peace of mind Each delivery of Chevron ISOCLEAN Certified Lubricant includes an ISOCLEAN Certificate of Analysis.
- **OE fluid cleanliness requirements** Customized to meet specific equipment manufacturers' fluid cleanliness requirements.
- Maximum efficiency advanced additive technology, resulting in less power consumption that provides the opportunity for increased energy, equipment and productivity efficiencies.

- Reduced operating temperatures synthetic base oils provide a lower coefficient of friction and can lower gearbox operating temperatures versus a mineral oil product.
- **Long lubricant life** very high oxidation resistance promotes long drain intervals.
- Wide temperature range low cold weather and high temperature protection that allows equipment operating temperature range from -30°C to 140°C, a far wider range than conventional gear oils.
- **Provides micropitting resistance** Delivers maximum micropitting and wear protection with reduced maintenance and increased system uptime.

FEATURES

Meropa EliteSyn XM ISOCLEAN
Certified Lubricants are formulated to be our ultimate offering that meets or exceeds industry performance standards. They enable the equipment manufacturers desire for efficiency improvements in designing gearboxes that are smaller, lighter and more energy efficient.

The additives in Meropa EliteSyn XM ISOCLEAN Certified Lubricants are compatible with paint coatings and with multiple types of seals to minimize the possibility of leaking seals and paint blistering on the inside of the gearbox. Competitor products with overaggressive chemistries may attack paint coatings and cause filter plugging.

Product(s) manufactured in the USA.

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

A **Chevron** company product

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APPLICATIONS

Meropa EliteSyn $^{\text{TM}}$ XM ISOCLEAN $^{\circledR}$ Certified Lubricants can be applied in:

- Industrial enclosed gearing where an AGMA EP lubricant is specified
- Bath, splash, circulating, or spray mist lubrication as applicable to the proper viscosity grade
- Marine gearboxes requiring an extreme pressure lubricant
- Rexnord gear drives requiring a synthetic extreme pressure or synthetic micropitting resistant lubricant

CLAIMS AND SPECIFICATIONS

| ISO Grade | 150 | 220 | 320 | 460 | 680 |
|--|-----------|-----------------------|-----------------------|----------------|-----------|
| AIST (formerly U.S. Steel) 224 | М | М | М | М | М |
| ANSI/AGMA 9005-F16-AS | М | М | М | М | М |
| DIN 51517/3 CLP | М | М | М | М | М |
| David Brown S1.53.101(5E) | М | М | М | М | М |
| Fives Cincinnati | M P-77 | M P-74 | M P-59 | M P-35 | M P-34 |
| Flender Rev. 16.1 Helical-Bevel-Planetary Gear Units | A | A | Α | A | A |
| GE D50E35 | | | М | М | М |
| Hansen Gear Units Series HP1, HP2, HPP, P4 and M4ACC | Α | A | Α | Α | A |
| Hitachi AC Final Drive Gear | М | М | М | М | М |
| ISO 12925-1 CKC | М | М | М | М | М |
| ISO 12925-1 CKD | М | М | М | М | М |
| Joy Mining Machinery | | M TO-SMEP | M TO-SHEP | | |
| Pekrun Werknorm N8053 | Α | Α | Α | Α | Α |
| Rexnord ^a Falk gear drive models: Class V, A, F, J, Planetgear Obsolete Falk gear drive models: Class D, G, Y, Link Belt Model "R" | Α | А | A | A | A |
| Rexnord ^a Falk EP + MP reistance | Α | A | A | A | A |
| SEW-Eurodrive Rev. 07 004 05 13 Helical-Bevel-Planetary Gear Units: X.e M1N, ML2, MCSeries Planetary Gear Units: P2e, P2, XP, P-X.e, PPK Series | A | A | A | A | A |
| Sumitomo Drive Technologies Paramax 9000 | A | A | Α | | |
| ZF | | A TE-ML 27F | A TE-ML 27H | A TE-ML 27J | |

a Consult with Rexnord/Falk Gear for applications: worm gear drives, high-speed drives, open gearing or any custom gear drive.

A: Approved for

M: Meets or exceeds requirements

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TYPICAL TEST DATA

| ISO Grade | Test Method | 150 | 220 | 320 | 460 | 680 |
|--|--------------------------|-------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Product Number | | 279010 | 279011 | 279012 | 279013 | 279014 |
| SDS Number U.S. Canada Mexico | | 50215 50216 50217 | 50215 50216 50217 | 50215 50216 50217 | 50215 50216 50217 | 50215 50216 50217 |
| AGMA Grade | | 4 EP | 5 EP | 6 EP | 7 EP | 8 EP |
| API Gravity | ASTM D287 | 30.1 | 28.6 | 27.2 | 26.1 | 24.9 |
| Density at 15°C, kg/L | ASTM D4052 | 0.8754 | 0.8836 | 0.8912 | 0.8975 | 0.9041 |
| Viscosity, Kinematic cSt at 40°C cSt at 100°C | ASTM D445 | 150 20.6 | 220 27.5 | 320 36.2 | 460 47.2 | 680 62.3 |
| Viscosity Index | ASTM D2270 | 160 | 160 | 160 | 160 | 160 |
| Flash Point, °C(°F) | ASTM D92 | 237(459) | 239(462) | 242(468) | 243(469) | 244(471) |
| Pour Point, °C(°F) | ASTM D5950 | -36(-33) | -36(-33) | -36(-33) | -36(-33) | -30(-22) |
| Foam Test, Seq. II Tendency, mL Stability, mL | ASTM D892 | 50 max 0 | 50 max 0 | 50 max 0 | 50 max 0 | 50 max 0 |
| Water Separation, Minutes to 0 mL emulsion | ASTM D1401 | 15 | 15 | 20 | 5 | 5 |
| Copper Corrosion 3h @ 100°C | ASTM D130 | 1b | 1b | 1b | 1b | 1b |
| Rust Test | ASTM D665A ASTM D665B | Pass Pass | Pass Pass | Pass Pass | Pass Pass | Pass Pass |
| Timken OK Load, lb | ASTM D2782 | >100 | >100 | >100 | >100 | >100 |
| Four-Ball Weld, Weld Point, kg Load Wear Index | ASTM D2783 | 250 58 | 250 ^a 58 ^a | 250 ^a 58 ^a | 250 ^a 58 ^a | 250 ^a 58 ^a |
| FZG Scuffing (A/8.3/90) Fail Stage | ASTM D5182 | > 14 | > 14 | > 14 | > 14 ^a | > 14 ^a |
| FZG Micropitting, Fail Stage | FVA 54 | 10/High | 10/High | 10/High | 10/High | 10/High |
| FAG FE-8 Bearing Test, Roller Weight Loss, mg | DIN 51819-3 | Pass | Pass | Pass | Pass | Pass |

a Read-Across data: For this testing, the lower ISO grades result(s) are typically more severe than higher ISO grades; therefore, data is read across from the lower grades.

Minor variations in product typical test data are to be expected in normal manufacturing.