



Clarity[®] Machine Oils

Description

Clarity Machine Oils are circulating oils for use in industrial equipment such as gear boxes, and are formulated to meet the critical demands of circulating oil systems in industrial equipment. These systems can expose the lubricant to a broad range of operating temperatures which hasten oxidation. Clarity Machine Oils have good tolerance to contamination with water, oxidation by products and other particles. Clarity Machine Oils are able to have a long lubricant life in spite of these contaminants and still do an outstanding job of keeping the circulating oil system clean and lubricating the many plain and antifriction bearings associated with this complex high speed equipment.

Typical Test Data

| Viscosity Grade | Clarity Machine Oils | | | | |
|---|----------------------|---------|---------|---------|---------|
| | ISO 100 | ISO 150 | ISO 220 | ISO 320 | ISO 460 |
| AGMA Grade | 3 EP | 4 EP | 5 EP | 6 EP | 7 EP |
| Viscosity, Kinematic cSt at 40°C | 95 | 143 | 209 | 304 | 437 |
| Viscosity, Kinematic cSt at 100°C | 11.3 | 14.6 | 18.4 | 23.5 | 29.0 |
| Viscosity Index | 105 | 101 | 97 | 98 | 95 |
| Flash Point, °C | 276 | 246 | 249 | 248 | 278 |
| Pour Point, °C | -15 | -15 | -15 | -12 | -18 |
| FZG Failure Load Stage, DIN 51354 | >12 | >12 | >12 | >12 | >12 |
| Rust Prevention, ASTM D 665 Procedure B | Pass | Pass | Pass | Pass | Pass |
| Oxidation Stability | | | | | |
| Hours to 2.0 mg KOH/g acid number, ASTM D 943 | 4,500 | 4,500 | 4,000 | 3,000 | 1,835 |
| Minutes to 25 psi pressure drop, ASTM D 2272 | 357 | 367 | 375 | 345 | 425 |

Recommended Uses

The Clarity Machine Oil series is recommended for use in circulating systems of industrial equipment as well as gear boxes. Clarity Machine Oils provide excellent filtration performance in the Pall Filterability Test using low micron filters. Clarity Machine Oils ISO 150, 220, 320, and 460 may be used as AGMA EP Oils 4, 5, 6, and 7, respectively, for back-side gears and enclosed gear drives. Clarity Machine Oils ISO 220 and 320 may also be used in plain and antifriction bearings.

Performance Benefits

1. High Temperature Stability

Contains an effective oxidation inhibitor to protect the oil at elevated ambient operating temperatures.

2. Long Lubricant Life

A well-balanced additive package and high quality base oils help minimize breakdown and maximize oil life. Gives excellent performance in the FAG FE-8 Bearing Test.

3. Excellent Wear Protection

Helps provide high FZG, Timken, and AGMA EP performance.

4. Excellent Water Separability

The lubricant separates readily from water.

5. Effective Foam Inhibition

Helps minimize amount of entrained air in the oil, minimizing the possibility of pump cavitation and also helps prevent surface foam.

6. Pall Wet Filterability

Clarity Machine Oils consistently provide excellent wet aged filtration with low micron filters.

7. Environmental Sensitivity

Ashless formulation facilitates reclaiming and recycling efforts. Nontoxic to aquatic species as determined by LC-50 testing.

Typical test data are average values only. Minor variations which do not affect product performance are expected in normal manufacturing. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended. (November, 2010)
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