



CLARITY[®] SYNTHETIC MACHINE OIL

150, 220, 320, 460

PRODUCT DESCRIPTION

Clarity[®] Synthetic Machine Oils are designed for use as EP gear oils and as paper machine oils.

CUSTOMER BENEFITS

Clarity Synthetic Machine Oils deliver value through:

- **High temperature stability** — Exceptional performance in the ASTM D943 Turbine Oil Stability Test. The test ran for >11,000 hours (>1 year) vs. 4000 hours for the mineral oil formulas.
- **Long lubricant life** — The PAO base oils with their high viscosity index, combined with a well-balanced additive package, minimize oil breakdown and maximize oil life.
- **Excellent wear protection** — Helps provide high FZG, Timken, and AGMA EP performance.
- **Excellent water separability** — The lubricants readily separate from water.
- **Effective foam inhibition** — Helps minimize amount of entrained air in the oils, minimizing the possibility of pump cavitation and also helps prevent surface foam.
- **Pall wet filterability** — Clarity Synthetic Machine Oils provide excellent wet filtration with low porosity filters, as determined by the Pall Filterability Test.
- **Environmental sensitivity** — Ashless formulation facilitates reclaiming and recycling circulating oils.

FEATURES

Clarity Synthetic Machine Oils combine our proprietary ashless formulation with the superior performance properties of polyalphaolefin (PAO) synthetic base oils. This combination provides greatly enhanced thermal and oxidation stability.

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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In addition, the high viscosity index of the PAO base oils offers greater lubricant film thickness than mineral oil-based products at high operating temperatures. Clarity Synthetic Machine Oils also offer excellent EP properties, allowing them to be used as EP gear lubricants.



Clarity Synthetic Machine Oils have excellent demulsibility (water separating ability) and wet filterability, as defined by the Pall Filterability Test.

Clarity Synthetic Machine Oils can be combined with mineral oil products for recycling purposes.

They provide long lubricant life due to exceptional oxidation stability, resulting in minimal lubricant usage and disposal.

FUNCTIONS

These products are formulated to meet critical demands of industrial equipment exposed to temperatures where mineral oil-based fluids are short-lived.

The extraordinary thermal and oxidative stability of PAOs are boosted by the outstanding antioxidant package in the Clarity Synthetic Machine Oil formulas.

The oils also contain highly effective antirust and nontraditional EP additives.

Clarity Synthetic Machine Oils 150, 220, 320, and 460 may be used as AGMA 4 EP, 5 EP, 6 EP, and 7 EP oils, respectively.

Clarity Synthetic Machine Oils provide excellent filtration performance in the Pall Filterability Test using low micron filters. This test defines oils having good filterability as giving 2000 mL filtration. After >10,000 mL, Clarity Synthetic Machine Oils were still filterable.

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APPLICATIONS

Clarity® Synthetic Machine Oils may be used in the following applications:

- Extreme temperature bearing and circulating oil systems
- Gear boxes
- Dryer section accessories
- Moisture profiler
- Calender rolls
- Crown control rolls
- Oil heated rolls
- High temperature air compressors
- High pressure hydraulic pumps

Clarity Synthetic Machine Oils are registered by **NSF** and are acceptable as lubricants where there is no possibility of food contact (H2) in and around food processing areas. The NSF Nonfood Compounds Registration Program is a continuation of the USDA product approval and listing program, which is based on meeting regulatory requirements of appropriate use, ingredient review and labeling verification.

Do not use in high pressure systems in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

TYPICAL TEST DATA

ISO Grade	150	220	320	460
<i>Product Number</i>	266174	266172	266175	266183
<i>SDS Number</i>	6872	6872	6872	6872
AGMA Grade	4 EP	5 EP	6 EP	7 EP
API Gravity	36.9	36.4	35.9	35.3
Viscosity, Kinematic cSt at 40°C cSt at 100°C	143 19.8	209 26.3	304 35.2	437 46.1
Viscosity, Saybolt SUS at 100°F SUS at 210°F	734 100	1077 129	1572 170	2270 222
Viscosity Index	159	160	162	163
Flash Point, °C(°F)	258(496)	236(457)	258(496)	270(518)
Pour Point, °C(°F)	-48(-54)	-45(-49)	-42(-44)	-36(-33)
Timken OK Load, lb	65	65	65	65
FZG Failure Load Stage, DIN 51354	>12	>12	>12	>12
Oxidation Stability Hours to 2.0 mg KOH/g acid number, ASTM D943 Minutes to 25 psi pressure drop, ASTM D2272	>8000 375	>10,000 375	>10,000 375	>10,000 375
Pall Filterability Wet Aged, mL to 25 psi	>10,000	>10,000	>10,000	>10,000

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

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.