



CLARITY[®] MACHINE OIL

150, 220, 320, 460

PRODUCT DESCRIPTION

Clarity[®] Machine Oils are circulating oils for use in industrial equipment such as gear boxes, calender stack bearings and crown control rolls.

CUSTOMER BENEFITS

Clarity Machine Oils deliver value through:

- **High temperature stability** — Contains an effective oxidation inhibitor to protect the oil at elevated ambient operating temperatures.
- **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.
- **Excellent wear protection** — Helps provide high FZG, Timken, and AGMA EP performance.
- **Excellent water separability** — The lubricant separates readily from water.
- **Effective foam inhibition** — Helps minimize amount of entrained air in the oil, minimizing the possibility of pump cavitation and also helps prevent surface foam.
- **Pall wet filterability** — Clarity Machine Oils consistently provide excellent wet aged filtration with low micron filters.
- **Environmental sensitivity** — Ashless formulation facilitates reclaiming and recycling efforts. Nontoxic to aquatic species as determined by LC-50 testing.

FEATURES

Clarity Machine Oils **150, 220, and 320** are formulated with high quality base oils.



Their ashless extreme pressure additive packages include rust, oxidation, and foam inhibitors.

Their outstanding oxidation stability minimizes deposit formation.

These oils have gear oil EP characteristics to minimize wear, and yet do not contain corrosive active sulfur additives.

The ashless formulations facilitate reclaiming and recycling of circulating oils.

They have excellent water separating ability (demulsibility), and also have exceptional wet filterability with fine porosity oil filters, as demonstrated by the Pall Filterability Test.

FUNCTIONS

Clarity Machine Oils are formulated to meet the critical demands of circulating systems in industrial equipment. These systems expose the lubricant to a broad range of operating temperatures which hasten oxidation. Clarity Machine Oils have good tolerance to contamination with water, oxidation byproducts 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.

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

The Clarity® Machine Oil series is recommended for use in circulating systems of industrial equipment as well as gear boxes, including wet-end systems, dryer bearings, and calender stacks in paper machine systems.

Clarity Machine Oils have been used successfully in the lubrication of many types of paper machine equipment including Valmet, Beloit, and Voith Sulzer paper machine equipment.

In addition, Clarity Machine Oils provide excellent filtration performance in the Pall Filterability Test using low micron filters.

Clarity Machine Oils 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 **220** and **320** may also be used in plain and antifriction bearings.

TYPICAL TEST DATA

ISO Grade	150	220	320	460
Product Number	294008	294009	294010	294011
SDS Number	6680	6680	6680	6680
AGMA Grade	4 EP	5 EP	6 EP	7 EP
API Gravity	29.3	27.7	26.1	26.3
Viscosity, Kinematic cSt at 40°C cSt at 100°C	143 14.6	209 18.4	304 23.5	437 29.0
Viscosity, Saybolt SUS at 100°F SUS at 210°F	749 78.1	1104 94.2	1616 117	2343 143
Viscosity Index	101	97	98	95
Flash Point, °C(°F)	246(475)	249(480)	248(473)	278(532)
Pour Point, °C(°F)	-15(+5)	-15(+5)	-12(+10)	-18(0)
Timken OK Load, lb	60	60	60	60
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	4500 367	4000 375	3000 345	1835 345
Pall Filterability Wet Aged, mL to 25 psi	>17,000	>17,000	>17,000	—

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.