



Rando® HD

Premium Anti-Wear Hydraulic Fluid

Product Data Sheet

Product description

Rando HD are efficient performance anti-wear hydraulic fluids designed for use in both mobile and stationary high pressure hydraulic systems.

Customer benefits

- **Protects equipment**
Robust anti-wear additive package minimizes wear by protecting surfaces when load causes breakdown of the lubricant film.
- **Minimizes downtime**
Rust and oxidation inhibitors help to prevent the production of abrasive particles from rust formation, and deposits, varnishes and sludges from oil breakdown, which can damage equipment surfaces and seals, and block filters prematurely.
- **Smooth operation**
Good hydrolytic stability and water separation characteristics promote excellent filterability in the presence of water contamination. Good anti-foam and air release properties help ensure smooth operation and system efficiency.

Applications

- Industrial hydraulic systems
- Hydraulics of mobile and construction equipment where a water separating oil is required
- Hydraulic systems with vane, gear or piston pumps
- Plastic injection molding machines
- Machine tools
- Enclosed gear systems (dependent on load)
- Industrial circulating systems

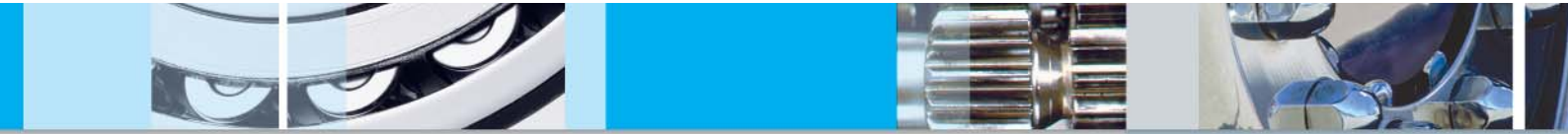
Product highlights:

- Robust anti-wear additive protects equipment
- Rust and oxidation inhibitors help to prevent deposits and minimize downtime
- Good hydrolytic stability and water separation help with smooth operation

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Performance standards

Rando HD oils meet the requirements of various industry standards:

- Parker Hannifin (Denison Hydraulics) HF-0 (ISO 46)
- Eaton Vickers I-286-S [industrial applications], M 2950-S [mobile applications] (ISO 46)
- Cincinnati Machine P-70 (ISO 46)
- David Brown Industrial Gears 1A (ISO 46)
- Bosch Rexroth former specification RE 90220 (ISO 46)
- ISO 6743:1999 Part 4, HM fluid
- ISO 11158:2009, HM
- DIN 51502:1990, HLP fluid (ISO 46)
- DIN 51524:2006-04 Part 2, HLP (ISO 46)
- SAE MS1004 HM (ISO 46)
- US Steel 126 and 127



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continued

Product specifications

RANDO HD	RESULTS	
KEY PROPERTIES	RESULTS	
ISO Viscosity Grade	46	320
Product Code	520211	520220
Kinematic Viscosity,		
mm ² /s @ 100°C	6.8	24.0
mm ² /s @ 40°C	46	320
Viscosity Index	101	95
Flash Point, °C	220	274
Pour Point, °C	-21	-15
FZG Pass Load Stage	10	10
Air Release at 50°C, min	8	-

This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended.

Produced by Chevron Lubricants; Africa, Middle East and Pakistan.

Environment, Health and Safety Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal. To obtain a MSDS for this product, visit www.caltexoils.com.

For more information, go to www.chevronlubricants.com

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RNDOHD/SA/PDSv4_07/06/2018

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