



Product description

Rando HD® oils are formulated with premium base oils and robust additives to help protect hydraulic pumps and systems. Rando HD oils helps ensure good film strength between metal surfaces and is further enhanced by antiwear additive protection.

Rando HD oils helps to deliver long oil service life with its premium base oil quality used in formulation.

Customer benefits and product features

Customer benefits

Protects equipment

Robust anti-wear additive package helps minimize wear by protecting surfaces when loads 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.

Longer oil service life

The use of premium base stocks helps resist oil thickening and deposit formation in service to minimize the possibility of an unscheduled change of hydraulic fluid. Oxidation test life is higher than solvent extracted hydraulic oil products.

Product features

- 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.
- Premium Group II base oil helps to ensure longer oil life.





Applications

General hydraulics in both mobile or stationary equipment using gear, vane or piston pumps across a wide range of industries.

- 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

Consult OEM representatives for independent verification, updates and recommendations.





Approvals, performance and recommendations

Developed independently by Chevron to comply with the following performance standards and specifications:

| RANDO® HD | 32 | 46 | 68 | 100 | 150 | 220 |
|---|----------|----------|----------|--------|--------|--------|
| AIST (US Steel) 126, 127 | М | М | М | - | - | - |
| ANSI/AGMA 9005-E02 R&O | - | М | М | М | М | М |
| Arburg Injection Molding | - | Α | - | - | - | - |
| ASTM D6158-HM | М | М | М | М | М | - |
| Bosch Rexroth RDE 90245 | Α | Α | Α | - | - | - |
| David Brown | M (0A) | M (1A) | M (2A) | M (3A) | M (4A) | M (5A) |
| DIN 51524/2 HLP | М | М | М | М | - | - |
| Eaton E-FDGN-TB002-E | Α | Α | Α | - | - | - |
| Fives Cincinnati P-68 | M (P-68) | M (P-70) | M (P-69) | - | - | - |
| Husky Injection Molding Systems Ltd, OEM-specific listing | - | А | - | - | - | - |
| ISO 11158-HM | М | М | М | М | М | М |
| Parker Hannifin (Denison) HF-0, HF-1, HF-2 | Α | Α | Α | - | - | - |
| SAE MS1004-HM | М | М | М | М | - | - |
| SMS Group SN 180-2 | Α | Α | - | Α | - | - |
| Vickers (Eaton) 35VQ25A | Α | Α | Α | - | - | - |
| Vickers (Eaton) I-286-S, M-2950-S | М | M | М | - | - | - |
| ZF TE-ML 04K | Α | Α | - | - | - | - |

A: Approved

M: Meets the requirements





Typical test data

| RANDO® HD | | | | | | | | | | |
|---------------------------------|-------------|-----------|-----------|--------------|-------------|-----------|--|--|--|--|
| ISO Viscosity Grade | 32 | 46 | 68 | 100 | 150 | 220 | | | | |
| Product Code | 520210 | 520211 | 520212 | 520213 | 520214 | 520215 | | | | |
| Viscosity, Kinematic | | | | | | | | | | |
| mm²/s at 40°C mm²/s at 100°C | 30.5 5.4 | 44 6.8 | 65 8.9 | 95.5 10.8 | 143 14.3 | 220 19 | | | | |
| Viscosity Index | 111 | 109 | 111 | 96 | 97 | 97 | | | | |
| Density at 15kg/L | 0.860 | 0.870 | 0.870 | 0.873 | 0.880 | 0.898 | | | | |
| Flash Point, °C | 216 | 238 | 240 | 240 | 250 | 274 | | | | |
| Pour Point, °C | -33 | -33 | -30 | -21 | -15 | -12 | | | | |
| FZG Fail Load Stage | 12 | 12 | 12 | 12 | 12 | 12 | | | | |
| Air Release at 50°C, min | 1.1 | 2 | 3.5 | 12 | 15 | - | | | | |

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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 the Product Information Center.

This Product Data Sheet (PDS) was produced for the Africa, Middle East and Pakistan region in good faith from the best information available at the time of issue. The specific information included may not directly reflect the local market or conditions. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. For the most up-to-date, country-specific information, please contact your local customer service center.

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