



Rando® HD

Efficient performance anti-wear hydraulic fluid

Product Data Sheet

Product description

Rando HD is an efficient performance anti-wear hydraulic fluid, designed for use in both mobile and stationary high pressure hydraulic systems.

Customer benefits

- Anti-wear additives protect vulnerable system components, extending equipment service life
- Rust and oxidation inhibitors prevent abrasive rust particles and harmful deposits and varnishes damaging equipment
- Hydrolytic stability and good water separation maintain reliable filterability in the presence of water contamination
- Anti-foam and air release properties ensure smooth operation
- Oxidation stability prevents oil thickening, sludge and deposit formation and unscheduled fluid change downtime
- Reliable filter and seal protection

Applications

- Industrial hydraulic systems
- Hydraulics in mobile and construction equipment
- Hydraulic systems with vane, gear or piston pumps
- Plastic injection moulding machines
- Machine tools
- Enclosed gear systems
- Industrial circulating systems

Approvals and performance specifications

Performance specifications

- | | |
|----------------------|--|
| • Denison Hydraulics | HF-0 (ISO 32, 46, 68) |
| • Vickers | M-2952-S, I-286-S (industrial applications)
M 2950-S (mobile applications) (ISO 32, 46, 68) |

Product highlights:

- Reliable wear protection
- Prevents rust and deposit formation
- Good water separation and air release
- Selected specification standards include:
 - Denison Hydraulics
 - Vickers
 - Cincinnati Lamb
 - Mannesmann Rexroth
 - ISO
 - DIN
 - SAE
 - US Steel
 - David Brown Industrial Gears

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Global Lubricants

- Cincinnati Lamb P-68 (ISO 32), P-69 (ISO 68), P-70 (ISO 46)
(formerly Cincinnati Milacron)
- Mannesmann Rexroth RE 07 075
- ISO Standard 6743 Part 4, Type HM
- DIN 51524 Part 2, HLP (ISO 22, 32, 46, 68, 100)
- SAE MS1004 HM (ISO 22, 32, 46, 68, 100)
- US Steel 126 and 127
- David Brown Industrial Gears OA, 1A, 2A, 3A, 4A, 5A

Typical test data

RANDO HD				
TEST	TEST METHODS	RESULTS		
Viscosity Grade		32	46	68
Product Code		520210	520211	520212
Kinematic viscosity, 40 °C, mm ² /s	ASTM D445	32.19	46.86	66.81
Kinematic viscosity, 100 °C, mm ² /s	ASTM D445	5.37	6.83	8.60
Viscosity Index	ASTM D2270	99	100	99
Air release at 50 °C, min	ASTM D3427	3	4	8
Flash Point COC, °C	ASTM D92	222	232	244
Pour Point, °C	ASTM D97	-24	-24	-24
FZG, Pass Load Stage	DIN 51354	10	10	10
Zinc Content, %wt	X-RAY	0.041	0.042	0.042



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continued

Typical test data

RANDO HD TEST	TEST METHODS	RESULTS		
Viscosity Grade		100	150	220
Product Code		520213	520214	520215
Kinematic viscosity, 40 °C, mm ² /s	ASTM D445	92.25	144.3	219.1
Kinematic viscosity, 100 °C, mm ² /s	ASTM D445	10.70	14.35	19.06
Viscosity Index	ASTM D2270	99	97	98
Air release at 50 °C, min	ASTM D3427	12	-	-
Flash Point COC, °C	ASTM D92	254	262	270
Pour Point, °C	ASTM D97	-21	-21	-18
FZG, Pass Load Stage	DIN 51354	10	10	10
Zinc Content, %wt	X-RAY	0.042	0.042	0.042

The information given in the typical data does not constitute a specification but is an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved. This supersedes all previous editions and information contained in them.

Disclaimer Chevron accepts no liability for any loss or damage suffered as a result of using this product for any application other than applications specifically stated in any Product Data Sheet's.

Health, safety, storage and environmental Based on current available information, this product is not expected to produce adverse effects on health when used for the intended application and in accordance with the recommendations provided in the Material Safety Data Sheet (MSDS). MSDS's are available upon request through your local sales office, or via the Internet. This product should not be used for purposes other than its intended use. When disposing of used product, take care to protect the environment and follow local legislation.

For more information, go to www.chevronlubricants.com