



CHEVRON RANDO® HDZ

ISO 15, 22, 32, 46, 68, 100

CUSTOMER BENEFITS

Chevron Rando HDZ deliver value through:

- **High oxidation stability** — Longer service life than attainable with conventional lubricants used in high pressure service.
- **Protection against rust and corrosion** — Gives excellent protection against corrosion of both copper and steel. Passes the ASTM D 665A distilled water rust test and ASTM D 665B salt water rust test.
- **High viscosity index** — Minimum change in viscosity over wide operating temperatures.
- **Foam inhibition** — Contains special foam suppressant. Eliminate both foaming and aeration problems.
- **Excellent antiwear properties** — Provides excellent wear protection when tested for Denison HF-0 approval.
- **Good stability** — in the presence of water in the ASTM D 2619 Hydrolytic Stability Test and in the presence of copper and steel at 135°C (275°F) in the Cincinnati Machine Thermal Stability Test.
- **Fast water separation** — Prevents rust problems by fast release of water.
- **Good filterability** — Excellent thermal and hydrolytic stability prevents formation of deposits which may interfere with filtration in equipment having close tolerances.

FEATURES

Chevron Rando HDZ are designed to give maximum protection to hydraulic pumps.

They are formulated with ISO SYN® base stocks incorporating antiwear additives, oxidation and corrosion inhibitors, foam and aeration suppressants, and a shear stable viscosity index improver.

Hydraulic systems, due to the nature of their operation, experience accelerated wear unless they are protected by clean, high quality antiwear hydraulic oils. Surging pressures in pumps and valves can increase metal-to-metal contact unless antiwear protection is present. The antiwear additives in Chevron Rando HDZ plate out on the metal surfaces. This plating minimizes metal-to-metal contact, which is most severe in vane-,

piston-, and gear-type pumps. As hydraulic pressures increase over 1000 psi, the need for antiwear protection increases proportionally.

APPLICATIONS

Chevron Rando HDZ are versatile lubricants available in multiviscosity ISO 15, 22, 32, 46, 68, and 100. The multiviscosity feature allows even and continuous power transmission over a wide temperature range with a minimum of shudder, and increased accuracy.

They are recommended for hydraulic or circulating oil systems, including marine on-deck machinery, hydraulic actuated loading bins, or equipment which runs at various operating temperatures.

Chevron Rando HDZ ISO 32, 46, and 68 meet all major pump manufacturers' requirements including:

- **Eaton-Vickers** I-286-S, M-2950-S, 35VQ25A
- **Racine** Model S
- **MAG Cincinnati, Cincinnati Machine** P 68 (ISO 32), P 70 (ISO 46), P 69 (ISO 68)
- **Denison** HF-0, HF-2

In a clean, dry environment, Chevron Rando HDZ ISO 15, 22, 32, 46, 68, and 100 typically meet a dielectric strength of 35 kV (ASTM D 877).

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

	15	22	32	46	68	100
<i>Product Number</i>	273282	273264	273260	273261	273262	273263
<i>MSDS Number</i>	23543	23537	23537	23537	23537	23537
API Gravity	28.4	31.7	33.1	32.2	31.1	30.9
Viscosity, Kinematic cSt at 40°C cSt at 100°C	15.8 4.0	23.1 5.1	32.0 6.3	46.0 8.3	68.0 11.0	100.0 14.1
Viscosity, Saybolt SUS at 100°F SUS at 210°F	85.3 39.7	119 43.3	163 47.4	234 54.0	346 63.8	513 75.6
Viscosity Index	159	155	153	157	154	143
Flash Point, °C(°F)	150(302)	188(370)	220(428)	186(367)	212(414)	232(450)
Pour Point, °C(°F)	-54(-65)	-53(-63)	-50(-58)	-45(-49)	-42(-44)	-39(-38)
Oxidation Stability Hours to 2.0 mg KOH/g acid number, ASTM D 943	—	—	>5000	>5000	>5000	>3000
Dielectric Strength, kV, ASTM D 877	35	35	35	35	35	35

Typical test data are average values only. Minor variations which do not affect product performance are to be expected in normal manufacturing.