



TEXACO RANDO[®] HDZ

15, 22, 32, 46, 68, 100

CUSTOMER BENEFITS

Texaco Rando HDZ oils 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 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**
- **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 that may interfere with filtration in equipment having close tolerances.
- **Seal conditioning** — For longer seal life and leak reduction.

FEATURES

Texaco Rando HDZ oils are designed to give maximum protection to hydraulic pumps.

They are formulated with 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 Texaco 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

Texaco Rando HDZ oils 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 that runs at various operating temperatures.

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

- **Vickers** I-286-S, M 2950-S, 35VQ 25
- **Racine** Model S
- **Cincinnati Machine** P-68 (ISO 32), P-70 (ISO 46), P-69 (ISO 68)
- **Denison** HF-0, HF-2

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

Texaco Rando HDZ oils meet the requirements (discontinued in 1998) of the **U.S. Department of Agriculture (USDA)** for use in federally inspected meat and poultry plants as H2 lubricants with no food contact.

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
CPS Number	221693	221538	221493	221494	221495	221496
MSDS Number	8635	8708	8708	8708	8708	8708
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 6.4	46.0 8.2	68.0 11.1	100.0 14.1
Viscosity, Saybolt SUS at 100°F SUS at 210°F	85.3 39.7	119 43.3	163 47.5	234 53.2	346 63.0	513 75.6
Viscosity Index	159	155	155	155	155	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	—	—	>6000	>6000	>6000	>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.