



CITGO A/W HYDRAULIC OIL NZ 32

Date 2/10

DESCRIPTION:

CITGO A/W Hydraulic Oil NZ 32 is formulated with premium paraffinic base oils and ashless antiwear additives to provide outstanding protection for demanding systems. CITGO A/W Hydraulic Oil NZ 32 does not rely on zinc-type antiwear additives, which is an important consideration since zinc compounds are regulated as priority pollutants under provisions of the Clean Water Act and SARA Title 313. It is nontoxic to fish and aquatic species based on OECD Test Method 203 1-12 and EPC LC₅₀. CITGO A/W Hydraulic Oil NZ 32 is environmentally sensitive and is inherently biodegradable.

BENEFITS:

- Formulated without zinc containing additives.
- Exhibits thermal stability to virtually eliminate heat-related sludge deposits.
- Provides rust and corrosion protection.
- Separates readily from water.
- Contains inhibitors to minimize foaming and air entrainment.
- Provides antiwear protection to pumps, motors and other hydraulic circuit components.
- Offers extended fluid service life with a balanced additive system to handle severe operating conditions.

APPLICATIONS:

CITGO A/W Hydraulic Oil NZ 32 offers the optimum in non-zinc antiwear protection to vane, piston, and gear pumps, motors, valves, and other hydraulic circuit components when used in accordance with the manufacturer's recommendations. It exceeds the stringent performance requirements of Denison HFO and Eaton (formerly Vickers) M-2950-S and I-286-S and is approved against Cincinnati Lamb (formerly Cincinnati Milacron) P-68. It may also be used in circulating systems of machine tools, presses, air compressors and other gear and bearing applications where rust and oxidation inhibited oils are required.

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Date 2/10 - (Continued)

TYPICAL PROPERTIES:**CITGO A/W HYDRAULIC OIL NZ 32**

Grade	ISO 32
Material Code	633461
Gravity, ASTM D 4052, °API	32.3
Density, lb/gal	7.19
Flash Point, ASTM D 92 (COC) °C (°F)	215 (419)
Viscosity, cSt at 40°C	32
cStat 100°C	5.54
Viscosity Index, ASTM D 2270	110
Pour Point, ASTM D 97, °C (°F)	-39 (-38)
Color, ASTM D 1500	L1.0
Total Acid No., ASTM D 664, mgKOH/g	0.25
Copper Corrosion, ASTM D 130, 3h at 100°C	1A
Rust Test, ASTM D 665 A, B	Pass
Four Ball Wear, ASTM D 4172, at 40 kg, mm	0.56
Foam Test, Seq. I, ml	20-0
Seq. II, ml	10-0
Seq. III, ml	20-0
Water Separability, ASTM D 1401, at 130°F	40-40-0
Zinc, ppm	nil
Aquatic Toxicity, OECD 203 1-12, 1000 mg/l, 96 hrs, LC50 Fathead Minnow	Nontoxic
Mysidopsis Shrimp	Nontoxic
Aquatic Toxicity, OECD 203 1-12, 10,000 mg/l, 96 hrs, LC50 Rainbow Trout	Nontoxic