SINCE 1839 Schaeffer's SPECIALIZED LUBRICANTS

TECHNICAL DATA

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ISO 9001 CERTIFIED

#112NZ HTC NO ZINC ISO 32 TO 68

HTC No Zinc is a non-detergent, ashless, non-zinc containing anti-wear, rust and oxidation inhibited premium quality oil that is specially formulated for use in all types of hydraulic, hydroelectric and steam turbines, air compressors, vacuum pumps and blower applications that specify the use of a non-zinc containing anti-wear oil.

HTC No Zinc is blended from the finest quality high viscosity index severely solvent refined severely hydro-finished 100% paraffin base oils available. These high viscosity index 100% paraffin base oils provide the HTC No Zinc with the following performance benefits:

- **Excellent Thermal and Chemical Stability.**
- **Excellent Resistance to Oxidation and Thermal Degradation.**
- **A Naturally High Viscosity Index.**
- **Excellent Film Strength. This results in increased wear protection.**
- **Excellent Operating Temperature Reduction. 100% pure paraffin base oils have better specific heat values (less heat is absorbed) and better thermal conductivity than conventional base oils. These combined properties help to reduce operating temperatures.**
- **Low Volatility Characteristics.**
- **Low Carbon Forming Tendencies**.

Blended into these 100% paraffin base fluids is highly specialized non-zinc containing multifunctional anti-wear additive package that provides the HTC No Zinc with the following performance benefits:

- **Exceptional Anti-Wear Protection**
- **Extended Pump and Bearing Life.**
- **Extended Turbine and Compressor Life.**
- **Enhanced Thermal and Oxidation Stability**
- **Superior Hydrolytic Stability.**
- **Excellent Demulsibility Characteristics**
- **Excellent Rust and Corrosion Protection, Especially in the Presence of Moisture.**
- **Excellent Antifoaming and Air Release Properties. (Contains a Non-Silicone Antifoam Agent)**
- **Reduced Sludge, Varnish and Deposit Formation.**
- **Enhanced Filterability**
- **Enhanced Seal Life**
- **Compatibility with zinc based fluids**
- **Reduced System Maintenance and Reduced Downtime**
- **Reduced Power Consumption.**

Further blended into these 100% paraffin base oils and this specialized multi-functional anti-wear additive package is a proven frictional modifier, Micron Moly®. Micron Moly® is a liquid soluble type of Moly that plates itself to sliding and rubbing metallic surfaces of the hydraulic, turbine or compressor. Once plated to the metal surfaces the Micron Moly® forms a long lasting solid lubricant film that is capable of withstanding pressures up to 500,000 pounds per square inch. This long lasting solid lubricant film prevents the metal surfaces of the engine from coming into contact with each other. By preventing metal-to-metal contact, damaging frictional wear is eliminated, thus leading to improved system efficiency, reduced energy consumption less downtime and longer equipment life.

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HTC No Zinc meets and exceeds the following specifications and manufacturer's requirements: Denison HF-O, Eaton-Vickers I-286-S and M-2950-S, Eaton-Char-Lynn, Haldex, Rexroth, Rexnord, Linde, Commercial Shearing HD 2/900, Commercial InterTech, Cincinnati Lamb Landis P38,P-54,P55, P-68, P-70, Sauer Danfoss, Sauer Sundstrand, ,Parker Hannifin, DIN- 51524 Parts 1, 2 & 3; DIN 51 515, MIL-L-17331H and MIL-L-17672D, U.S. Steel 120, 126, 127,136, AFNOR E-48-600HL, General Electric GEK 32568F, Brown Boveri HTGD 90117, Westinghouse turbine specifications, Ingersoll Rand, Joy, Gardner Denver, Sullair, Worthington, LeRoi, Quincy and Atlas Copco compressor specifications.

TYPICAL PROPERTIES

ISO GRADE	**32**	**46**	**68**
AGMA GRADE	**-----**	**1**	**2**
Specific Gravity	0.8708	0.8708	0.8765
Viscosity SUS 100°F (ASTM D-2161)	155-207	213-250	336-361
Viscosity cSt @ 40°C (ASTM D-445)	30-40	41.40-48.50	65.00-70.00
Viscosity cSt @ 100°C (ASTM D-445)	5.0-6.0	6.2-7.1	8.5-9.5
Viscosity Index (ASTM D-2270)	100	99	105
Flash Point °F/°C (ASTM D92)	420°/215°	430°/221°	435°/224°
Fire Point °F/°C (ASTM D-92)	460°/238°	460°/238°	470°/243°
Pour Point °F/°C (ASTM D-97)	-10°/-23°	0°/-18°	0°/-18°
Rust Test (ASTM D-665)			
Procedure A	Pass	Pass	Pass
Procedure B	Pass	Pass	Pass
Copper Strip Corrosion Test (ASTM D-130)	1A	1A	1A
Total Acid Number (ASTM D-664)	0.69	0.69	0.69
Foam Test (ASTM D-892)			
Sequence I	0/0	0/0	0/0
Sequence II	0/0	0/0	0/0
Sequence III	0/0	0/0	0/0
Four Ball Wear Test (ASTM D-1472)			
(1 hour, 130°F, 40kg) Scar Diameter, mm	0.27	0.27	0.27
Falex Continuous Load (ASTM D-3233 Procedure A) Failure Load, lbs.	1250	1250	1250
FZG Gear Test (ASTM D-5182)			
Failure Stage	12th	12th	12th