



## Clarity<sup>®</sup> Hydraulic Oil AW

### Description

Clarity<sup>®</sup> Hydraulic Oil AW is designed to give excellent protection in both mobile and stationary hydraulic equipment in marine applications, as well as in environmentally sensitive areas. Clarity Hydraulic Oil AW 100 provides the necessary seal protection and lubrication for marine stern tube applications. Clarity Hydraulic Oil AW is formulated with premium base oil technology and an ashless (“zinc-free”) additive system that provides exceptional oxidation stability, water separability, foam suppression, and protection against wear, rust and corrosion. Clarity Hydraulic Oil AW is a long-life lubricant (not vegetable oil based), with dramatically longer TOST life (ASTM D943 oxidation stability test) than conventional zinc-based hydraulic fluids. A longer TOST life equates to longer service life, which can improve the customer’s bottom line. This level of oxidation stability is especially applicable in high efficiency (high speed, high temperature, high output) applications where severe stress is placed on the hydraulic fluid.

### Typical Test Data

Viscosity Grade	ISO 22	ISO 100
Viscosity, Kinematic cSt at 40°C	22.6	95.0
Viscosity, Kinematic cSt at 100°C	5.3	13.8
Viscosity Index	180	145
Flash Point, °C	200	266
Pour Point, °C	-52	-40
API Gravity	37.1	31.8

### Recommended Uses

Clarity Hydraulic Oil AW is designed for use in mobile and stationary hydraulic vane-, piston-, and gear-type pumps. Clarity Hydraulic Oil AW has shown excellent performance in applications involving servo-valves using multimetal components. The antiwear performance of Clarity Hydraulic Oil AW makes it especially suited for high performance marine applications utilizing axial piston pumps where pressures may exceed 350 bar, and the zinc-free formula makes it well suited for applications involving yellow metals found in hydraulic systems. Clarity Hydraulic Oil AW 22 and 100 are shear-stable high VI hydraulic oils designed to improve equipment efficiency and increase operating temperature range of the applicable grade. Many hydraulic systems are required to operate in environmentally sensitive areas where leaks or spills of hydraulic fluid may result in contamination of nearby waterways. Clarity Hydraulic Oil AW is well suited for applications situated in environmentally sensitive areas. Clarity Hydraulic Oil AW meets the requirements of DIN 51524 Part 3 (HVLP), ASTM D6158 HV and ISO 11158 L-HV. Clarity Hydraulic Oil AW 100 is approved for stern tube application by Blohm+Voss, Kemel (Kobelco) and Wärtsilä-Japan.

### Performance Benefits

#### 1. Premium Performance

Ashless formulation meets or exceeds major vane, piston and gear pump manufacturer’s requirements for viscosity, rust and corrosion protection, hydrolytic stability, water separability, foam inhibition, and filterability.

#### 2. Exceptional Oxidation Stability

Longer service life than conventional zinc-based antiwear hydraulic oils or vegetable hydraulic oils.

#### 3. Excellent Antiwear Properties

Provides excellent wear protection.

#### 4. Environmental Sensitivity

Clarity Hydraulic Oil AW passes the stringent acute aquatic toxicity LL/EL 50 test.

#### 5. Excellent Low Temperature Pumpability

The ISO 22 grade was specifically developed to ensure good low temperature fluidity for operation as low as -40°C (-40°F).

#### 6. Zinc-free/Ashless

Suited for applications involving yellow metals found in piston pumps.

Typical test data are average values only. Minor variations which do not affect product performance are expected in normal manufacturing. Always confirm that the product selected is consistent with the original equipment manufacturer’s recommendation for the equipment operating conditions and customer’s maintenance practices. (December, 2012)

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