



marine lubricants

# Clarity<sup>®</sup> Synthetic EA Hydraulic Oil 100



## Description

Clarity<sup>®</sup> Synthetic EA Hydraulic Oil 100 is an ash free readily biodegradable high performance hydraulic oil that meets EPA Vessel General Permit (VGP 2013) requirements for environmentally acceptable lubricants. It is designed to give maximum protection in hydraulic equipment used on vessels and in environmentally sensitive areas.

Clarity Synthetic EA Hydraulic Oil 100 is designed to give maximum protection in hydraulic equipment used in vessels and in both mobile and stationary hydraulic pumps in high-performance industrial applications. It is formulated with synthetic base stock and an ashless, zinc-free additive system that can provide good oxidation stability, water separability, foam suppression, and protection against wear, rust and corrosion. Clarity Synthetic EA Hydraulic Oil 100 is a high VI synthetic product which allows for operation over a wide temperature range.

## Typical Characteristics

| MPID                                      | 219013   |
|---|----------|
| Viscosity, Kinematic cSt at 40°C          | 100.0    |
| Viscosity, Kinematic cSt at 100°C         | 18.8     |
| Viscosity Index                           | 210      |
| Flash Point, °C                           | 193      |
| Pour Point, °C                            | -48      |
| Copper Corrosion                          | 1b       |
| Rust Test, Synthetic Sea Water            | PASS     |
| FZG, Fail Load Stage                      | 12       |
| Elastomer Compatibility                   |          |
| Buton-N, Viton, Polyurethane              | PASS     |
| Biodegradability, OECD 301B, % in 28 days | >60      |
| Aquatic Toxicity                          |          |
| Fathead minnow, OECD 203, mg/L            | >10.000  |
| Daphnia magna, OECD 202, mg/L             | >120     |
| Algae, OECD 201, mg/L                     | >10.000  |
| Bioaccumulation                           | Negative |

## Recommended Applications

Clarity Synthetic EA Hydraulic Oil 100 is designed to give maximum protection in hydraulic equipment used on vessels and in environmentally sensitive areas. This lubricant is readily biodegradable, non-bio accumulative, and minimally toxic. In the event of a spill, the product biodegrades by more than 60% within 28 days, minimizing the impact to the environment.

## Clarity Synthetic EA Hydraulic Oil 100 Is Approved For:

SKF  
 Wärtsilä

B&V  
 Kobleco



## marine lubricants

### Clarity Synthetic EA Hydraulic Oil Is Recommended For Use In:

**Blohm+Voss**

**HEPR** in mobile and stationary hydraulic vane-piston gear-type pumps

*Clarity® Synthetic EA Hydraulic Oil 100 is miscible with common mineral based hydraulic oils, however, following good practice, in-service oils should be completely drained to avoid any risk of additive incompatibility and ensure that the full performance benefits are achieved. Do not use in high pressure systems near flames, sparks, and hot surfaces. Use only in well ventilated areas. Keep container closed.*

### Performance Benefits

#### 1. Environmentally Acceptable

Meets the requirements of the EPA Vessel General Permit (VGP 2013) for biodegradation, low toxicity and low bioaccumulation.

#### 2. Zinc-Free

Suited for applications involving yellow metals found in axial piston pumps.

#### 3. Long Oil Life

Good ability of the synthetic base stock to withstand oxidation at high operating temperatures can result in maximum service life for the oil relative to vegetable-based readily biodegradable products.

#### 4. Low Temperature Pumpability

Specifically developed with high viscosity index to help ensure good fluidity for low operating temperatures.

#### 5. Premium Performance

Ashless formulation helps to provide good protection against wear of hydraulic pumps, as well as rust and corrosion protection, hydrolytic stability, water separability, foam inhibition, and filterability.



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