# Clarity® Synthetic EA Hydraulic Oil

## Description

Clarity® Synthetic EA Hydraulic Oils[1] are readily biodegradable high performance hydraulic oils that meet EPA Vessel General Permit (VGP) requirements for environmentally acceptable lubricants. These lubricants are non-bioaccumulative 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 Oils are designed to give maximum protection in hydraulic equipment used in vessels and in both mobile and stationary hydraulic pumps in high-performance industrial applications. Clarity Synthetic EA Hydraulic Oils are formulated with synthetic base stock and an ashless, zinc-free additive system that provide exceptional oxidation stability, water separability, foam suppression, and protection against wear, rust and corrosion. Clarity Synthetic EA Hydraulic Oils are high VI synthetic products which allow for operation over a wide temperature range. Clarity Synthetic EA Hydraulic Oils are designed to the performance requirements of conventional antiwear hydraulic oils, while providing an additional benefit in case of leaks or incidental discharge to the environment. Clarity Synthetic EA Hydraulic Oils ISO 68 and 100 are recommended for use in marine stern tube applications.

## Typical Test Data

| Viscosity Grade | ISO 46 | ISO 68 | ISO 100 |
|---|---|---|---|
| Code | 219011 | 219012 | 219013 |
| Viscosity, Kinematic cSt at 40°C | 46.0 | 68.0 | 100.0 |
| Viscosity, Kinematic cSt at 100°C | 9.0 | 11.7 | 18.8 |
| Viscosity Index | 180 | 170 | 210 |
| Flash Point, °C | 221 | 215 | 193 |
| Pour Point, °C | −44 | −48 | −48 |
| API Gravity | 34.2 | 33.8 | 33.0 |

## Recommended Uses

Clarity Synthetic EA Hydraulic Oils[1] are designed to give maximum protection in hydraulic equipment used on vessels and in environmentally sensitive areas. They are used in hydraulic systems as recommended by ISO 15380, HEPR in mobile and stationary hydraulic vane-, piston-, and gear-type pumps. Clarity Synthetic EA Hydraulic Oils meet the requirements of DIN 51524-3 (ISO 46, 68), ISO 15380 HEPR, and Parker-Denison (ISO 46, 68). Clarity Synthetic EA Hydraulic Oil ISO 68 and 100 are approved for Stern tube applications by Blohm+Voss, Kemel Company, and Wärtsilä. Clarity Synthetic EA Hydraulic Oils are 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 in the vicinity of 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 for biodegradation, low toxicity and low bioaccumulation.

### 2. Excellent Low Temperature Pumpability

Specifically developed with high viscosity index to ensure good low temperature fluidity for low temperature operations.

### 3. Zinc-Free

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

### 4. Premium Performance

Ashless formulation provides excellent protection against wear of hydraulic pumps, provides rust and corrosion protection, hydrolytic stability, water separability, foam inhibition, and filterability.

### 5. Long Oil Life

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

1. Chevron Clarity EA Hydraulic Oils are rebrands of Terresolve Technologies, Ltd. products as follows:

| Chevron | Terresolve Technologies |
|---|---|
| Clarity® Synthetic EA Hydraulic Oil 46 | ENVIROLOGIC® 3046 |
| Clarity® Synthetic EA Hydraulic Oil 68 | ENVIROLOGIC® 3068 |
| Clarity® Synthetic EA Hydraulic Oil 100 | ENVIROLOGIC® 3100 |

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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. (July, 2015)