Key Benefits

- Qualified to ISO13628-6/API 17F, approved for use by all major equipment manufacturers
- Maximum operating temperatures up to 100°C/212°F
- Environmentally acceptable lubricant
- Designed to meet global environmental requirements
- Excellent ferrous and non-ferrous corrosion protection properties
- Excellent extreme pressure and anti-wear lubrication properties
- Resistant to microbial infection
- Fully compatible with Oceanic HW500 Series, HW500P Series, HW443 Series, HW700 Series & XT900
- Manufactured to NAS 1638/AS 4059 Class 6/6b-f or better cleanliness
- Free Fluid Monitoring programme ensures long service life

Description

Water-based hydraulic fluids for use in modern open and closed loop Subsea Production control systems. Oceanic HW500E fluids offer the same high performance and reliability as industry standard Oceanic HW500 fluids while exceeding stringent environmental requirements.

HW500E series fluids differ only in glycol content, which ensures optimal response times in all geographical regions.

Approvals

Oceanic HW500E has been tested to ISO13628-6/API 17F specification and meets all original equipment manufacturer (OEM) requirements.

Typical Physical Properties

<table>
<thead>
<tr>
<th></th>
<th>Oceanic HW510E</th>
<th>Oceanic HW525E</th>
<th>Oceanic HW540E</th>
<th>Oceanic HW560E</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Fluorescent Pink Fluid</td>
<td>Fluorescent Pink Fluid</td>
<td>Fluorescent Pink Fluid</td>
<td>Fluorescent Pink Fluid</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>9.2</td>
<td>9.3</td>
<td>9.3</td>
<td>9.3</td>
</tr>
<tr>
<td><strong>Specific Gravity @15.6°C</strong></td>
<td>1.02</td>
<td>1.039</td>
<td>1.06</td>
<td>1.08</td>
</tr>
<tr>
<td><strong>Kinematic Viscosity (cSt)</strong></td>
<td>Solid</td>
<td>Solid</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>-20°C (-4°F)</td>
<td>Solid</td>
<td>Solid</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>0°C (32°F)</td>
<td>3.1</td>
<td>4.8</td>
<td>6.8</td>
<td>12</td>
</tr>
<tr>
<td>40°C (104°F)</td>
<td>1.0</td>
<td>1.5</td>
<td>1.7</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Pour Point</strong></td>
<td>-4°C (25°F)</td>
<td>&lt;-15°C (&lt;5°F)</td>
<td>&lt;-25°C (&lt;-13°F)</td>
<td>-50°C (-58°F)</td>
</tr>
<tr>
<td><strong>Freeze Point</strong></td>
<td>-21°C (-6°F)</td>
<td>48°C (-54°F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Complies with API</strong></td>
<td>6A class R,S &amp; T</td>
<td>Complies with all API</td>
<td>6A class P.R,S &amp; T</td>
<td>6A class P.R,S &amp; T</td>
</tr>
</tbody>
</table>

For further recommendations, technical information, Health & Safety data sheets, OEM or environmental approvals, email wigansales@macdermid.com

THE CONTROL FLUID TECHNOLOGY LEADER

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Environmental Information

MacDermid maintains worldwide environmental approvals and can offer Oceanic Subsea Production control fluids suitable for use in every exploration and production region around the world. The current environmental status of Oceanic HW500E fluids in your area can be obtained from our environmental specialists.

Storage

Oceanic HW500E fluids should be stored in dry conditions, ideally out of direct sunlight. Normal storage temperature range is 5 to 40°C.

Material Compatibility

Oceanic HW500E fluids contain performance additives which ensure high levels of compatibility with materials typically used in subsea production control equipment. Extensive material compatibility tests have been performed with Oceanic HW500E fluids.

Ferrous metals (cast iron, carbon steel, low & high alloy steels, stainless steels...)

Non-ferrous metals (copper, brass, bronze, other metals and alloys*)

Avoid Zn, Cd, Pb and Mg metals. Aluminum should be hard anodized.

Coatings and ceramic materials

Avoid porous coatings. Compatible with most ceramic parts. Check ceramic coatings

Packaging & sealing materials (elastomers and thermoplastics*)

Compatible with NBR, HNBR, FFKM, VMQ/FMVQ, CR, TFE/PTFE, PEEK.

Some FKM & AU/EU/PU have proven to be incompatible

Umbilical hose liner thermoplastics

Compatible with Nylon 11, PE and Polyether ester copolymers

Absorbent gasket materials

Avoid cork, leather, cotton impregnated materials

Paints

Cured epoxy, phenolic and nylon based paints are satisfactory. Avoid less resistant paints as they soften. Wash spillages immediately with water

Filter elements

Polypropylene and glass fiber filter elements recommended over paper filters

* As material compatibility varies from compound to compound and supplier to supplier, consult supplier for recommendations or request specific compatibility tests.

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