Shell Tellus S2 MX 46

Industrial Hydraulic Fluid, Group II Base Oil Technology, Industrial Applications

Shell Tellus S2 MX fluids are high performance hydraulic fluids based on Group II base oils that provide outstanding protection and performance in most manufacturing and many mobile equipment operations. They resist breakdown under heat or mechanical stress and help prevent damaging deposit formation that can decrease the efficiency of your hydraulic power system.

Performance, Features & Benefits

• Long fluid life – maintenance saving
  Shell Tellus S2 MX fluids help extend equipment maintenance intervals by resisting thermal and chemical breakdown. This minimizes any harmful sludge formation and provides better reliability and system cleanliness.
  Shell Tellus S2 MX fluids also have good stability in the presence of moisture, which ensures long fluid life and reduces the risk of corrosion and rusting, particularly in moist or humid environments.

• Outstanding wear protection
  Tellus S2 MX is designed to meet the demands of hydraulic systems well in to the future, including new specifications such as Bosch Rexroth Fluid Rating RDE 90245 and enhanced extreme pressure performance in the FZG test (FLS 11 at ISO VG 32). It also demonstrates excellent performance in the tough Denison T6H20C (dry and wet versions) and the demanding Eaton Vickers 35VQ25. Shell Tellus S2 MX fluids can help system components last longer.

• Maintaining system efficiency
  Excellent filterability and high performance water separation, air release and antifoam characteristics all help contribute to maintaining or enhancing the efficiency of hydraulic systems. Optimization of friction characteristics also helps reduce harmful stick-slip effects.
  An oil cleanliness particle count of ISO 4406 20/18/15 or better (measured at the point of filling) helps reduce the impact of contaminants on filter blocking, allowing both extended filter life and enhancing equipment protection.

Shell Tellus S2 MX fluids are formulated for exceptional foam control and excellent air release to facilitate efficient hydraulic power transfer and minimise fluid and equipment impacts of cavitation induced oxidation that can shorten fluid life.

Main Applications

• Industrial hydraulic systems
  Shell Tellus S2 MX fluids are suitable for a wide range of hydraulic power applications found in manufacturing and industrial environments.

• Mobile hydraulic fluid power transmission systems
  Shell Tellus S2 MX fluids can be used effectively in mobile hydraulic power applications such as excavators and cranes, except where significant ambient temperature variations are encountered. For these applications we recommend Shell Tellus S2 VX.

• Marine hydraulic systems
  Suitable for marine applications where ISO HM category hydraulic fluids are recommended.

Specifications, Approvals & Recommendations

Product is designed to meet:

• Bosch Rexroth Fluid Rating RDE 90245
• Parker Denison (HF-0, HF-1, HF-2)
• Eaton E-FDGN-TB002-E
• Fives (Cincinnati Machine) P-70
• ISO 11158 (HM fluids)
**Typical Physical Characteristics**

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

<table>
<thead>
<tr>
<th>Properties</th>
<th>Method</th>
<th>Shell Tellus S2 MX 46</th>
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</thead>
<tbody>
<tr>
<td>ISO Fluid Type</td>
<td></td>
<td>HM</td>
</tr>
<tr>
<td>Kinematic Viscosity @32°F cSt</td>
<td>ASTM D445</td>
<td>580</td>
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<tr>
<td>Kinematic Viscosity @104°F cSt</td>
<td>ASTM D445</td>
<td>46</td>
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<tr>
<td>Kinematic Viscosity @212°F cSt</td>
<td>ASTM D445</td>
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<tr>
<td>Viscosity Index</td>
<td>ISO 2909</td>
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<tr>
<td>Density @15°C kg/l</td>
<td>ISO 12185</td>
<td>0.856</td>
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<tr>
<td>Flash Point (COC) @°F</td>
<td>ISO 2592</td>
<td>446</td>
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<tr>
<td>Pour Point @°F</td>
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<tr>
<td>Colour</td>
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<td>Water Separation</td>
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<tr>
<td>TOST life</td>
<td>ASTM D943</td>
<td>5000</td>
</tr>
</tbody>
</table>

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**Health, Safety & Environment**

**Health and Safety**

Shell Tellus S2 MX hydraulic fluid is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from http://www.epc.shell.com/

**Protect the Environment**

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

**Additional Information**

**Advice**

Advice on applications not covered here may be obtained from your Shell representative.