Technical Data Sheet

- Long Oil Life
- Extra Protection
- Maintain System Efficiency
- Industrial Applications

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.

DESIGNED TO MEET CHALLENGES

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.

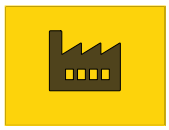
- **Maintaining system efficiency**

  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 List RDE 90245
- Parker Denison (HF-0, HF-1, HF-2)
- Danfoss Vickers E-FDGN-TB002-E
- Fives (Cincinnati Machine) P-70
- ISO 11158 (HM fluids)
- DIN 51524 Part 2 HLP type
- ASTM D6158 -05 (HM fluids)
- Swedish Standard SS 15 54 34 AM
- GB 11118.1-2026 L-HM general and high pressure

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk

Compatibility & Miscibility

- **Compatibility**

  Shell Tellus S2 MX fluids are suitable for use with most hydraulic pumps.

- **Fluid Compatibility**

  Shell Tellus S2 MX fluids are compatible with most other mineral oil based hydraulic fluids. However, mineral oil hydraulic fluids should not be mixed with other fluid types (e.g. environmentally acceptable or fire resistant fluids).

- **Seal & Paint Compatibility**

  Shell Tellus S2 MX fluids are compatible with seal materials and paints normally specified for use with mineral oils.

Typical Physical Characteristics

Properties			Method	Shell Tellus S2 MX 46
ISO Fluid Type				HM
Kinematic Viscosity	@0°C	cSt	ASTM D445	580
Kinematic Viscosity	@40°C	cSt	ASTM D445	46
Kinematic Viscosity	@100°C	cSt	ASTM D445	6.9
Viscosity Index			ISO 2909	105
Density	@15°C	kg/l	ISO 12185	0.856
Flash Point (COC)		°C	ISO 2592	230
Pour Point		°C	ISO 3016	-30
Colour			ASTM D1500	L0.5
Water Separation		minutes	ASTM D1401	20
TOST life		hours minimum	ASTM D943	5 000

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

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 Safety Data Sheet, which can be obtained from https://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.

