



# Shell Tellus S1 M 46

## Industrial Hydraulic Fluid

- *Reliable Protection*
- *Industrial Applications*

Shell Tellus S1 M 46 is a quality anti-wear hydraulic fluid which provides cost effective and reliable protection. Good performance in most industrial applications under normal operating conditions and standard oil intervals.

### DESIGNED TO MEET CHALLENGES

#### Performance, Features & Benefits

- **Oxidation resistant**

Resists oxidation in presence of air, water and copper therefore offering good oil life and deposit control in hydraulic systems.

- **Good anti-wear performance**

Formulated with proven anti-wear technology to be effective throughout the range of operating conditions, including low and moderate conditions to protect components like pumps etc.

#### Main Applications



- **Industrial hydraulic systems**

Suitable for applications under mild or normal conditions where temperature changes and filtration requirements are moderate.

- **Older static systems**

A cost-effective solution where leakage is a problem, Shell Tellus S1 M offers good all-round basic protection and performance.

- **Other applications**

Suitable as a general use lubricant where a basic mineral oil with anti-corrosion and anti-oxidation properties are required.

For more demanding and specialized applications, please consult your Shell representative for advanced range of Shell Hydraulic fluids for systems where the stress on the fluid is high and ultra-fine filtration and sophisticated control valves are employed.

#### Specifications, Approvals & Recommendations

- ISO 11158 (HM fluids)
- DIN 51524 Part 2 HLP type
- Denison Hydraulics (HF-0, HF-1 and HF-2)
- Eaton Vickers (Brochure 694)
- Fives Cincinnati P-70 (ISO 46)

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

#### Compatibility & Miscibility

- **Compatibility**

Shell Tellus S1 M fluids are suitable for use with most hydraulic pumps. However, please consult your Shell representative before using in pumps containing silver plated components.

- **Fluid Compatibility**

Shell Tellus S1 M 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 S1 M fluids are compatible with seal materials and paints normally specified for use with mineral oils.

## Typical Physical Characteristics

Properties	Method	Shell Tellus S1 M 46
ISO Viscosity Grade	ISO 3448	46
ISO Fluid Type		HM
Kinematic Viscosity @40°C cSt	ASTM D445	46
Kinematic Viscosity @100°C cSt	ASTM D445	6.7
Viscosity Index	ISO 2909	98
Density @15°C kg/l	ISO 12185	0.879
Flash Point (COC) °C	ISO 2592	230
Pour Point °C	ISO 3016	-30
TOST Life hours minimum	ASTM D943	3 000
RPVOT hours minimum	ASTM D2272	250
FZG (A/8,3/90) fail stage	ISO 14635-1	10

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

- Guidance on Health and Safety is available on the appropriate 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.