



Previous Name: Shell Hydrau HM

Shell Hydraulic S1 M 46

- *Reliable Protection*
- *Industrial Applications*

Industrial Hydraulic Fluid

Shell Hydraulic S1 M fluids provide cost effective reliable protection and performance in most industrial manufacturing applications under normal operating conditions and standard oil maintenance intervals.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

Shell Hydraulic S1 M provides a cost-effective solution for moderate severity applications where the superior performance of higher tier products is not required.

Main Applications



- **Hydraulic systems – General usage**

Suitable for applications operating 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 Hydraulic 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 is required. For more demanding and specialized applications, the Shell Tellus range of fluids provide superior performance 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)

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk, or the OEM Approvals website.

Compatibility & Miscibility

- **Compatibility**

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

Typical Physical Characteristics

Properties			Method	Hydraulic 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	97
Density	@15°C	kg/l	ISO 12185	0.873
Flash Point (COC)		°C	ISO 2592	230

Properties	Method	Hydraulic S1 M 46
Pour Point °C	ISO 3016	-15

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 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.

Viscosity - Temperature Diagram for Shell Hydraulic S1 M

