



# Shell AW Hydraulic Oil S2 46

- *Reliable Protection*
- *Industrial Applications*

## Industrial Hydraulic Fluid

Shell AW Hydraulic Oil S2 is a high quality anti-wear hydraulic fluid which provides cost effective and reliable protection and performance in both mobile and stationary industrial applications under normal operating conditions and standard oil intervals.

### DESIGNED TO MEET CHALLENGES

#### Performance, Features & Benefits

- **Oxidation resistant**

Shell AW Hydraulic Oil S2 has been designed with an anti-oxidant system which helps prevent the oxidation of the fluid. Resistance to oxidation will help to prevent the formation of sludge and varnish. ASTM D943 TOST testing results show excellent performance (>5000 hours)

Shell AW Hydraulic Oil S2 has good stability in the presence of moisture, which helps to ensure adequate fluid life and reduces the risk of corrosion and rusting.

- **Anti-wear performance**

Shell AW Hydraulic Oil S2 are formulated with proven anti-wear technology to be effective throughout a wide range of operating conditions. The product was designed to meet the performance standards of major OEM vane and piston pump tests.

- **System Efficiency**

Shell AW Hydraulic Oil S2 are designed to enhance the overall efficiency of industrial and mobile hydraulic systems. Fast air release, rapid water separation, excellent filterability and low foaming behaviour all help to make hydraulic systems cleaner, more efficient and more productive.

#### Main Applications



- **Industrial hydraulic systems**

Suitable for a wide range of applications where temperature changes and filtration requirements are moderate. For operations requiring a wide temperature operating window, consider the use of Tellus S2 VX series.

- **Mobile hydraulic fluid power transmission systems**

Shell AW Hydraulic Oil S2 is suitable for use in mobile equipment such as cranes and excavators except where high variation in ambient temperature conditions occur where Tellus S2 VX should be recommended.

- **Older Static Systems**

A cost-effective solution where leakage is a problem, Shell AW Hydraulic Oil S2 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

### Designed to meet the requirement of:

- Parker Denison Hydraulics (HF-0, HF-1, HF-2)
- Cincinnati Fives (Cincinnati Machine P-68, P70, P69)
- Eaton E-FDGN-TB002-E
- ISO 11158 (HM fluids)
- ASTM D6158-05
- DIN 51524 Part 2 HLP type

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

## Compatibility & Miscibility

### • Compatibility

Shell AW Hydraulic Oil S2 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 AW Hydraulic Oil S2 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).

## Typical Physical Characteristics

Properties	Method	Shell AW Hydraulic Oil S2 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	0.879
Flash Point (COC) °C	ISO 2592	230
Pour Point °C	ISO 3016	-30
Oxidation (TOST) 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 AW Hydraulic Oil S2 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 <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.