



# Shell Tellus Oils T

## *High performance hydraulic oils for wide temperature ranges*

Shell Tellus Oils T are premium quality hydraulic oils generally acknowledged to be the 'standard-setter' in the field of industrial hydraulic and fluid power lubrication.

They incorporate a Shell patent antiwear technology and a shear stable viscosity index improver to enhance and maintain excellent viscosity/temperature characteristics.

### Applications

- Hydraulic and fluid power transmission systems subjected to wide variations in temperature or where low viscosity change with fluctuating temperature is required.

Certain critical hydraulic systems can only tolerate small variations in viscosity with fluctuating temperature if efficiency and responsiveness are to be maintained. Hydraulic oils, such as Shell Tellus Oil T, which exhibit multigrade viscosity characteristics may be used to particular advantage in these circumstances.

If even further limited viscosity variations are required Tellus Oils STX should be considered.

### Performance Features and Benefits

- Wide operating temperature range**  
The use of selected viscosity index improver reduces the viscosity variation with temperature allowing the systems to operate in a wide oil temperature range with more consistent performances. Reasons for oil temperature modification could be different ones like: environment temperature variation, intermediate working condition or variable workload
- Maintained viscosimetric characteristics unchanged with time**  
The high shear stability of the viscosity index improver used allows to retain the original viscosimetric characteristics preventing the oil to get thinner and thinner at high temperature and therefore preventing the reduction of the max operating temperature and the system efficiency.

- Outstanding anti-wear performance**  
Proven and patent anti-wear additives are incorporated to be effective throughout the range of operating conditions, including low and high load conditions. Outstanding performance in a range of piston and vane pump tests have been obtained including the newest Denison T6H (the so called hybrid pump), the tough Denison T6C (dry and wet versions) and the demanding Vickers 35VQ25. Tellus T help system components last longer.
- Hydrolytic stability**  
Tellus T have good chemical stability in the presence of moisture, which ensures long oil life and reduces the risk of corrosion and rusting.
- Superior filterability**  
Tellus T are suitable for ultra-fine filtration, an essential requirement in today's hydraulic systems. They are unaffected by the usual products of contamination, such as water and calcium, which are known to cause blockage of fine filters. Customers can use finer filters, therefore achieving all the benefits of having in use cleaner fluids.
- Oxidation resistant**  
Resist oxidation in the presence of air, water and copper. Turbine Oil Stability Test (TOST) results show outstanding performance; low acidity, low sludge formation, low copper loss; therefore extending oil drain interval life and minimising maintenance costs.
- Thermal stability**  
Thermally stable in modern hydraulic systems working in extreme conditions of load and temperature. Tellus T are highly resistant to degradation and sludge formation therefore improving system reliability and cleanliness.

• **Low friction**

Tellus T has high lubrication properties and excellent low friction characteristics in hydraulic systems operating at low or high speed. Prevents stick-slip problems in critical applications enabling very fine control of machinery.

• **Excellent air release and anti-foam properties**

A careful selection of additives has been conducted to ensure quick air release without excessive foaming. Quick air release helps minimising cavitation and slow oxidation, maintaining system and fluid performance.

• **Good water separation**

Good water separation properties (demulsibility). Resists the formation of water-in-oil emulsions and prevents consequent hydraulic system and pump damage.

**Specifications and Approvals**

Tellus Oils T have the following approvals:  
 CINCINNATI P-68 (ISO 32)  
 CINCINNATI P-70 (ISO 46)  
 CINCINNATI P-69 (ISO 68)  
 DENISON HF-0  
 DENISON HF-1

DENISON HF-2  
 Eaton (Vickers) M-2950 S  
 Eaton (Vickers) I-286 S

Tellus Oils T meet the requirements of:  
 Swedish Standard SS 15 54 34 AM  
 ISO 11158  
 AFNOR NF-E 48-603

**Compatibility**

Tellus T are compatible with most pumps. However, please consult your Shell Representative before using in pumps containing silver plated components

**Seal & Paint Compatibility**

Tellus T are compatible with all seal materials and paints normally specified for use with mineral oils.

**Health & Safety**

Guidance on Health and Safety are available on the appropriate Material Safety Data Sheet, which can be obtained from your Shell representative.

**Protect the environment**

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

**Typical Physical Characteristics**

Shell Tellus Oil T	15	22	32	37	46	68	100
ISO Oil Type	HV	HV	HV	HV	HV	HV	HV
Kinematic Viscosity @ -20°C mm <sup>2</sup> /s	340	695	1300	1690	2350		
@ 40°C mm <sup>2</sup> /s	15	22	32	37	46	68	100
@ 100°C mm <sup>2</sup> /s (ASTM D 445)	3.7	4.8	6.1	6.8	7.9	10.5	14.0
Viscosity Index (ISSO 2909)	142	142	143	142	143	142	142
Density @ 15°C kg/m <sup>3</sup> (ISSO 12185)	871	872	872	871	872	877	889
Flash Point °C (Cleveland Open Cup) (ISO 2592)	170	190	210	220	225	225	225
Pour Point °C (ISO 3016)	-42	-42	-39	-39	-39	-36	-33

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

