



Product Data Sheet from Rapid-Torc Lubricants

TELLUS* T

SUPERIOR ALL-SEASON HYDRAULIC PERFORMANCE

NOW 'NEW AND IMPROVED'

PRODUCT LINE

Tellus T Oils have been reformulated using the latest generation anti-wear hydraulic oil chemistry. New Tellus T maintains an exceptional performance profile while achieving improvements in wet filterability, tolerance to contamination and frictional characteristics. Tellus T now passes Denison's T6C vane pump test.

Tellus T Oils are premium quality multigrade anti-wear hydraulic oils. Tellus T oils are available in ISO viscosity grades 15, 22, 32, 46 and 68, to cover virtually all extreme climatic conditions on a year-round basis.

APPLICATIONS

Tellus T Oils are especially designed for use in 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 Tellus T, which exhibit multigrade viscosity characteristics may be used to particular advantage in these circumstances.

Tellus T Oils are recommended for use in:

- excavators, cranes, shovels, drills, crawlers, "cherry pickers", etc. operating at winter temperatures below -40°C and also at summer heats to the mid +30°C range
- woodlands and snow removal equipment
- portable compressors and circulating systems, servicing gears and bearings, where temperatures vary seasonally

In many cases, the correct viscosity grade may be used year-round eliminating the need for seasonal oil changes.

PERFORMANCE BENEFITS

- **Low Temperature Fluidity** - Special viscosity index technology minimises variation in viscosity with changes in temperature and provides good pumpability at low temperatures. Excellent flow properties at low temperatures. The appropriate grade enables you to:
 - reduce non-productive warm-up time
 - minimize energy losses in starting equipment at low temperatures compared to more viscous fluids.
 - reduce the risk of pump cavitation problems which can destroy a pump during start-up at low temperatures.
- **Outstanding Anti-Wear Protection** - Proven anti-wear additives are incorporated to be effective throughout the range of operating conditions, including low and severe duty high load conditions. Tellus T meets the performance requirements of major pump manufacturers including Denison vane and piston pump tests (Denison HF-0) and Eaton Vickers 35VQ25 and 104C vane pump tests.
- **All-Season Protection and Longer Pump Life** - The use of oils with high viscosity indexes can extend the operating temperature range of equipment without the need to change the oil. Tellus T Oils are designed to maximize these benefits by offering excellent low temperature flow while retaining good high temperature protection.
- **High Shear Stability** - An excellent resistance to viscosity breakdown (shear) coupled with a premium anti-wear package ensures long pump life at high operating temperatures.
- **Superior Water Tolerance**

- Tellus T Oils exhibit excellent hydrolytic stability , a measure of the tendency of the additives in an oil to react with water.
 - They also provide excellent filterability . Often in the presence of water, poorer quality oils can generate insoluble materials which will result in filter plugging. New improved Tellus T demonstrates improved wet filterability in the Denison T6C pump test.
 - Formulated with additives which ensure excellent demulsability , the ability to separate from water. Water which fails to separate effectively in a reservoir may contribute to excessive wear if recirculated through the system.
- Oxidation Stability - Advanced technology Tellus T resists oxidation degradation and sludge formation even when make-up rates are low. Resists chemical breakdown and lacquer formation.
 - Excellent Air Release and Anti-foam Properties - Careful use of additives ensures quick air release without excessive foaming. Tellus T Oils are now silicone-free.
 - Tellus T - reduced downtime and longer equipment life!

**PERFORMANCE SUMMARY
TESTS AND MANUFACTURER APPROVALS**

Denison HF-O, HF-2	Approved
Denison T6C vane pump (Wet and Dry Phases)	Pass
Denison P-46 piston pump	Pass
Eaton Vickers M-2952-S, M-2950-S, I-286-S	Meets
Eaton Vickers 35VQ25	Pass
Eaton Vickers 104C	Pass
Cincinnati Machine P-68, P-69, P-70	Approved

TYPICAL PROPERTIES

Grades	T15	T22	T32	T46	T68	
PRODUCT CODE	407-154	407-157	407-159	407-179	407-169	ASTM Method
Density at 15°C, kg/m ³	841.8	858.8	869.2	873.9	878.3	D 1298
Colour, max,	2.0	2.0	2.0	2.0	3.0	D 1500
Pour Point °C	-57	-54	-45	-42	-36	D 97
Flash Point, COC, °C	114	166	212	226	252	D 92
Kinematic Viscosity						D 445
cSt at 40°C	15.2	22.7	32.2	45.9	67.9	
cSt at 100°C	4.1	5.1	6.4	7.95	10.0	
Viscosity Index	191	163	156	146	132	D 2270
Cu Corrosion at 100°C	1a	1a	1a	1a	1a	D 130
Rust Test -24 hrs synthetic seawater	Pass	Pass	Pass	Pass	Pass	D 665
TAN-E, mgKOH/g	0.6	0.6	0.6	0.6	0.6	D 664
Demulsibility, minutes to 40/40/0	5	10	15	20	30	D 1401
Brookfield						D 2983
cP at -20°C	274	680	1438	3081	7400	
cP at -30°C	856	2567	6734	14019	40613	
cP at -40°C	2908	11480	32086	93465	-	
cP at -45°C	5865	25236	80101	-	-	
Estimated Operating Range, °C (minimum startup, °C) (1)	-29 to 44 -47	-21 to 56 -39	-14 to 67 -32	-8 to 78 -27	0 to 87 -21	

(1) Based on 9,000 cP viscosity and the use of proper warm-up techniques (e.g. system should be operated without load until minimum operating temperature achieved, etc.) Temperature limits may vary with type, design of equipment and severity of operation.