


PETRONAS

PETRONAS Tutela Trans TO4

SAE 10W, 30, 50, 60

Designed to be the Fluid Technology Solution of choice providing protection and care for Off-Highway hydraulic systems and transmissions

Description and Applications

PETRONAS Tutela Trans TO4 is a high-quality, advanced technology hydraulic and transmission fluid delivering optimized performances and component durability for today's hydraulic systems, hydrostatic and powershift transmission, axles, final drive and wet brakes. Thanks to extensive bench testing and field-testing, makes it suitable for use in off-highway equipment requiring the Caterpillar TO-4 fluids.

PETRONAS Tutela Trans TO4 meets the requirement of Caterpillar, Komatsu and others off-highway equipment.

Benefits

PETRONAS Tutela Trans TO4 protects your Business Profits and your Vehicle Availability while reducing your operating costs, through longer hydraulic system and transmission life, driven by:

- Significantly improved clutch life, friction and anti-wear performance compared to the best CD/TO-2 engine oils, to extend components life.
- Enhanced load-carrying capability and gear wear protection as measured by the FZG Gear Test to provide excellent anti-wear performance in powershift transmissions, gearboxes and final drives.
- Good thermal and oxidation stability to prevent formation of deposits and sludge to prolong oil life
- Improved hydraulic oil stability and protection against high pressure pump
- Good seals compatibility to prevent oil leakage
- Robust corrosion protection on yellow metals and steel

Provides excellent Driving Experience through:

- Superior frictional performance; no degradation of frictional performance or clutch slippage to consistently maximize equipment output, particularly when moving heavy loads on an incline.
- Optimized hydraulic oil stability for consistent operability during the entire service life
- Low foaming tendency to reduce noise
- Good low temperature fluid flow performance

Approvals, Specifications and Recommendations

PETRONAS Tutela Trans TO4 is a high-quality lubricant that meets and exceeds below performances:

Approvals and Specifications:

- API CF
- API MT-1
- CAT TO-4
- ZF TE-ML 03C
- ZF TE-ML 07F

SAE 10W SAE 30 SAE 50 SAE 60

✓	✓		
		✓	
✓	✓	✓	✓
✓	✓		
	✓		

Performance level and suitable for use:

- Allison C-4
- Komatsu KES 07.868.1 (2002)

✓	✓	
✓	✓	✓

Note: Always consult your owner's manual to check recommended viscosity grade and specifications for your specific vehicle

Typical Physical Data

Parameters	Method	Unit	Typical Value			
			10W	30	50	60
Density @15°C	ASTM D 4052	g/cm ³	0.880	0.890	0.900	0.900
Kinematic Viscosity @100°C	ASTM D 445	mm ² /s (cSt)	6.1	9.9	17.0	22.5
Kinematic Viscosity @40°C	ASTM D 445	mm ² /s (cSt)	38	81	180	280
Viscosity Index	ASTM D 2270	-	>100	>90	>90	>90
Pour Point	ASTM D 97	°C	-39	-30	-27	-15
Cold Cranking Simulator @- 25 °C	ASTM D 5293	mPa.s (cP)	5500	-	-	-
Flash Point COC	ASTM D 92	°C	>200	>180	>180	>180
Total Base Number (TBN)	ASTM D 2896	mgKOH/g	9.5	9.5	9.5	9.5

All technical data is provided for reference only. These characteristics are typical of current production. Whilst future production will conform to PLI's specification, variations in these characteristics may occur.

Health, Safety and Environment

This product is unlikely to present any significant health and safety hazards when used in the recommended application. Avoid contact with skin. Wash immediately with soap and water after skin contact. Do not discharge into drains, soil or water.

For further detail regarding storage, safe handling, and disposal of product, please refer to product SDS or contact us at: www.pli-petronas.com

Important Note

The word PETRONAS, the PETRONAS logo and such other related trademarks and/or marks used herein are trademarks or registered trademarks of PETRONAS Lubricants International Sdn. Bhd. ("PLISB"), or its subsidiaries or related Holding Corporation under license unless indicated otherwise. The data sheet and the information contained herein is believed to be accurate as of the date of printing. PLISB makes no express or implied representation or warranties as to its accuracy or completeness or information in or any transaction performed. The PLI Documents information provided is based on standard tests under laboratory conditions and is given only as a guide. Users are advised to ensure that they refer to the latest version of these PLI Documents. It is the responsibility of the users to evaluate and use products safely, to assess suitability for the intended application and to comply with all applicable laws and regulations imposed by the respective local authorities.

Safety Data Sheets are available for all our products and should be only be consulted for appropriate information regarding storage, safe handling and disposal of the product. No responsibility shall be taken by either PLISB or its subsidiaries and related holding corporation for any loss or injury or any direct, indirect, special, exemplary, consequential damages or any damages whatsoever, whether in action of contract, negligence or other tortious action, in connection or resulting from abnormal use of the materials and/or information, from any failure to adhere to recommendations, or from hazards inherent in the nature of the materials and/or information. All products, services and information supplied are under our standard conditions of sale. Please consult with any of our local representative in the event you require any further information.

SAE 10W Code: 76676

SAE 30 Code: 76677

SAE 50 Code: 76678

SAE 60 Code: 76679