



PETRONAS Tutela ATF 500 HD

Designed to be the Fluid Technology Solution of choice providing improved protection for automatic transmission systems

Description and Applications

PETRONAS Tutela ATF 500 HD is a high-quality Automatic Transmission Fluid for buses, coaches and commercial vehicles, delivering total protection even in most severe conditions for today's automatic transmissions over their standard service life. Its wide coverage of major manufacturer specifications, thanks to extensive bench testing and field-testing, makes it suitable for use for virtually all heavy-duty automatic transmissions

PETRONAS Tutela ATF 500 HD is approved for Daimler, MAN, Voith, Volvo and ZF automatic transmissions.

Benefits

PETRONAS Tutela ATF 500 HD protects your Business Profits and your Vehicle Availability while reducing your operating costs, through:

- **Longer Transmission Life** driven by:
 - o Enhanced anti-wear and gear protection under harsh conditions to extend components life
 - o Enhanced thermal and oxidation stability under high temperature, providing viscosity stability to prolong oil life
 - o High shear stability for a constant film strength and effective lubrication during the oil service life to protect all moving parts

Provides excellent Driving Experience through:

- **Smooth, shudder-free shift performance** under both normal and severe operating conditions
- **Excellent low temperature viscosity** for improved lubrication and shifting comfort during start-up in cold conditions
- **Significantly reduced transmission noise**

Approvals, Specifications and Recommendations

Specifications:

- DEXRON®-IIIH
- Allison C-4 (TES-228)
- Bosch TE-ML 09

Approvals:

- MAN 339 Type L1, L2, Z1, Type V1
- MB-Approval 236.1
- MB-Approval 236.9
- Volvo 97341
- VOITH H55.6335.xx
- ZF TE-ML 03D, 04D, 05L, 09, 14A, 17C, 21L

Performance Level:

- Allison TES-389B
- IVECO 18-1807 Class AG3/III
- Volvo 97340

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
Appearance	-	-	Bright & Clear
Color	-	-	Red
Density @15°C	ASTM D 4052	g/cm ³	0.860
Kinematic Viscosity @100°C	ASTM D 445	mm ² /s (cSt)	7.7
Kinematic Viscosity @40°C	ASTM D 445	mm ² /s (cSt)	38
Viscosity Index	ASTM D 2270	-	177
Brookfield Viscosity @-40°C	ASTM D 2983	mPa.s (cP)	18000
Pour Point	ASTM D 97	°C	-45
Flash Point COC	ASTM D 92	°C	214

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

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