



PETRONAS

PETRONAS Tutela Coolant LL-Si

Designed to be the Fluid Technology Solutions of choice providing excellent protection and longer fluid life for Vehicle cooling systems

Description and Applications

PETRONAS Tutela Coolant LL-Si is a premium performance concentrated Long-Life Coolant delivering optimized performance and component durability for vehicles cooling systems. Formulated with Mono-Ethylene Glycol enhanced with a special Silicate Organic Acid inhibitor (Si-OAT Technology), free of nitrites, borates, phosphates and amines, it provides excellent protection against overheating, frost and corrosion, especially for the cooling systems that contain innovative light alloy materials.

Its advanced technology makes it suitable for latest generation vehicles, including hybrid electrified applications. Suitable for Europeans, Americans and Asian passenger cars and commercial vehicles

Benefits

PETRONAS Tutela Coolant LL-Si enhances your vehicle availability while significantly reducing your operating costs through:

- **Long Life Technology** to extend the fluid service life, preventing from deposit formation and circuit clogging
- **Extended Cooling System Life** driven by:
 - o Outstanding corrosion resistance to protect metal-based components
 - o Enhanced protection against freezing when outside temperature is down to -38°C (-36.4°F)*
 - o Enhanced protection against boiling in case of circuit temperature up to 125°C (257°F)*
 - o Very good elastomer and plastic compatibility for a longer component's life

Provides outstanding Driving Experience through:

- **Excellent heat transfer properties to prevent overheating**

*When blended with 50% water and with 1 bar (15 psi) radiator cap

Approvals, Specifications and Recommendations

Specifications:

- AS 2108-2004
- ASTM D 3306
- ASTM D 4985
- ASTM D 6210
- BS 6580:2010
- CUNA NC 956-16
- GB 29743-2013
- JIS K 2234:2006
- ONORM V 5123
- SAE J1034
- SANS 1251:2005

Performance Level:

- Cummins CES 14603
- Deutz DQC CC-14
- Daimler/Mercedes-Benz 325.5 and 325.6
- IRIZAR, S. COOP from Sep. 2016
- Liebherr Minimum LH-01-COL3A
- MAN 324 Type Si-OAT
- MTU MTL 5048
- Porsche from MY 1996
- VW / Audi / Seat / Skoda / Lamborghini / Bentley / Bugatti - TL 774-G

Note: Always consult your owner's manual to check recommendation for your specific vehicle

Typical Physical Data

Parameters	Method	Unit	Typical Value
Color	-	-	Red
Relative Density @15°C	ASTM D 1122	g/cm ³	1.129
pH, 50% vol in DI water	ASTM D 1287	-	8.4
Reserve alkalinity	ASTM D 1121	ml	9.5
Boiling point	ASTM D 1120	°C	> 160
Freezing point, 50% vol in DI water	ASTM D 1177	°C	<-38
Glassware corrosion test	ASTM D1384	-	PASS

All technical data are 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 refers to product SDS or contact us at: www.pli-petronas.com

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