

AUTO CHEMICAL

LONG LIFE COOLANT

Engine antifreeze Coolant

TCL



オーバーヒートを防止し、メタルプロテクション性能で エンジンの寿命を延ばすTCLクーラント

Prevent overheating

オーバーヒート防止

Anti-corrosion & Anti Rust

防錆防蝕性能

Anti-Bubble Performance

消泡性能

2年または40,000kmの交換

Metal protection performance of **TCL LONG LIFE COOLANT**.

TCL Long Life Coolant is excellent in metal protection performance acting as a coating shield to all kinds of metals inside the engine.

It protects water jackets and metals inside the engine which leads to “**EXTENSION OF ENGINE LIFESPAN**”

In addition to new cars, it also works effectively on metal in used car engines and protects the engine of your precious car.

Outline

Prevent overheating

Lubricity in our own additive reduces the resistance of water in the cooling system.

In this case, cooling performance improves and to prevent overheating by flowing coolant smoothly.

Excellent Anti-corrosion & Anti-rust performance

With anticorrosion & antirust performance in its own additives, it works the rust prevention effect of all metals (aluminum, cast iron, steel, brass, solder, copper) in the cooling system and protects the metal parts of the engine and radiator from rust. TCL coolant is suitable widely from the old car to the latest model one.

Excellent Anti-Bubble performance

The antifoaming agent in the original additive prevents the generation of bubbles in the water pump, cylinder head, and water jacket, thereby preventing overheating and oxidative deterioration accompanying overheating.

Characteristics Table

Product kind	Engine antifreeze coolant
TYPE	Premix type of non amine
Based glycol	Ethlene glycol
Color	Green, Red, Blue

Specifications

Volume	QTY PER CARTON	N.W(Kgs)	G.W(Kgs)	Measurement
1L	20pcs	20.82	22.52	43.5x37.7x26.2cm
2L	9pcs	18.7	20.9	46x31.5x26cm
4L	6pcs	24.98	27.38	40.5x35.5x29.5cm

TCL ロングライフクーラントのメタルプロテクション性能

Metal protection performance of TCL LONG LIFE COOLANT.

TCLのロングライフクーラントは、エンジン内のあらゆる種類の金属にシールドコートを施すメタルプロテクション性能に優れており、エンジン内のウォーターラインと金属を保護し「エンジンの寿命を延ばします」。

新車はもとより、中古車のエンジン内金属にも有効に作用し、大切な車のエンジンを守ります。

TCL LONG LIFE COOLANT is excellent in metal protection performance that shield coating conducts to all kinds of metals inside the engine.

It protects water jackets and metals inside the engine which leads to "EXTENSION OF ENGINE LIFESPAN".

In addition to new cars, it also works effectively on metal in used car engines and protects the engine of your precious car.

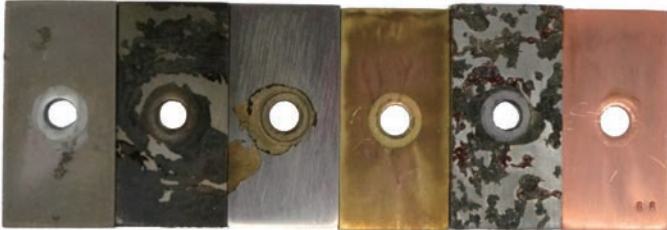
防錆性能テスト Anti-rust performance test

当社製品 新品クーラント使用
Our products - New coolant



アルミニウム Aluminum 鋳鉄 Cast iron 鋼 Steel 黄銅 Brass はんだ Solder 銅 Copper

防錆性能が低いクーラントの使用
Case of coolant which has low anti-corrosion quality



アルミニウム Aluminum 鋳鉄 Cast iron 鋼 Steel 黄銅 Brass はんだ Solder 銅 Copper

多くの試験片に腐蝕がおり、このようなクーラントを使用していれば、ラジエターの詰まりや漏れなどにより、オーバーヒートを引き起こす可能性があります。また、オーバーヒートを起こしたエンジンは焼き付きや熱による歪みを起こす場合もあります。

By using low anti-rust performance coolant, many problems occurred on each type of the metal test pieces. These problems may clog up the radiator or cause the coolant to leak out, which overheats the engine. Overheating may distort the engine due to seizure and heat.

How to use

- Discharge the old coolant in the cooling system completely, and flush the inside of it well.
- Inspect the cooling system inside, please repair if there is a point of leakage.

Characteristic

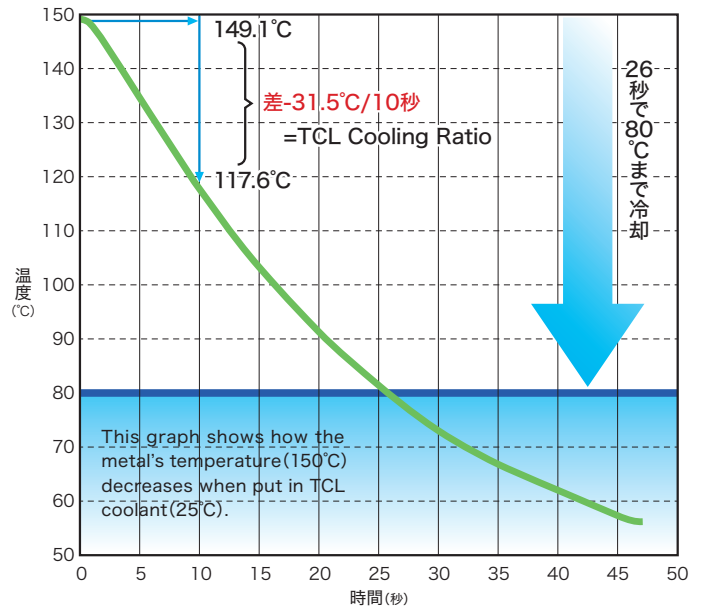
Using a high-boiling materials as main components

The main component of TCL long life coolant is ethylene glycol having a boiling point close to 200°C, so it almost never evaporate in the case of undiluted solution. In addition, because it has a boiling point of 100°C or higher, even when mixed with water, and rarely evaporates during use.

Description

- Replace every 2 years or 40,000km.
(Environmental consideration to keep your car running at its best condition.)
- As it is a diluted long life coolant, it should be used directly.
(DO NOT ADD WATER)
- Obtains strong anti-rust, defoaming and cooling effects due to special additives.
- Can be used for all types of vehicles.

TCLクーラントの冷却性能 Cooling performance of TCL coolant



*冷却性能測定法 Cooling performance measurement method

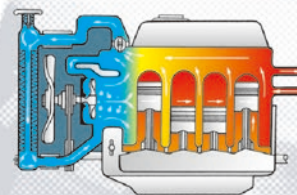
150°Cに加熱した金属(アルミニウム鋳物)を、25.0°Cにした規定量のクーラントに浸した時の金属内部の温度変化を測定する。

Measure the temperature change inside the metal (aluminum casting) heated up to 150°C in the specified amount coolant at 25.0°C.

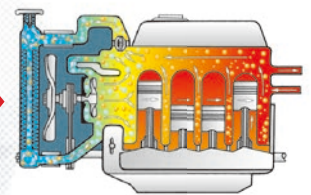
The role of anti-foaming performance

As deteriorated coolant degrades the antifoaming performance, the circulation will be stagnated because of foaming when the coolant passes through the cooling system. As the result, radiator cooling system won't work by causing overheating and other troubles. also, it increases the risk of damage by cavitation.

New Coolant



Coolant defoaming performance is degraded



Foam causes cavitation which corrodes the cylinder liner.



It is a corroded cylinder liner by cavitation which is caused by degraded coolant.

Cavitation is the phenomenon that bubbles are generated and disappeared. It will cause pressure changes due to poor circulation and vibration of coolant. The shock of ruptured bubbles causes high pressure in the system and will damage the cylinder liner and water pump.

Deterioration of the coolant can not be judged only by color! We recommend regular LLC exchange in order to prevent the trouble!