



AISIN Long Life Coolant / Anti-Freeze JIC

Advanced Formulation for Antirust Agent
Environmentally Friendly - Advanced Non-Amine Type

DESCRIPTION

Premium quality, ethylene glycol based antifreeze coolant concentrate, designed primarily to meet the stringent corrosion protection requirements of late model car engines which have a significant amount of aluminum in their construction. With the anti-rust performance, AISIN LLC is suits for the Aluminum Water Pump and to all material used cooling line of engine including Aluminum radiator.

DESCRIPTION

- Please change Long-Life Coolant every 2 years. For vehicles of long distance (truck), it is recommended to change every year.
- Please add distilled or ion-exchanged water only into coolant of 30 ~ 60% (JIS) concentration.
- If concentration is low, it is easy to be frozen and give damage to the radiator, or the anti-rust cannot function well.

REASON OF LLC COOLANT DEGRADATION

Functional decline in high temperature

- There will be decline in function after usage for a long time
- Heat from the engine will decrease the function of anti-foaming, anti-oxidizing, and anti-rust of the coolant

Purity decrease due to rust

- Radiator will rust and be melt into coolant if the radiator is used over a long time
- The coolant will be dirtier as time proceeds and function declines

SUPERIOR PROPERTIES

Long-Life Coolant Concentration	20%	50%	100%
Ethylene glycol, Contents wt (%)	18 - 22	48 - 52	90 - 94
Density, g/cm ³ @20°C	1.040	1.080	1.128
Equilibrium Boiling Point, °C	103	110	165
pH, undiluted solution	8.0	8.0	8.3
Flash Point, °C (Cleveland open-cup)	137	None	None
Package (Liters)	1L, 4L	1L, 4L	1L, 4L

Customer Benefits

- Protect cooling systems from corrosion and deposits
- Provides a higher boiling point for protection against engine overheating
- Prevents coolant from freezing
- Long service life
- Maximizes Aluminium engine components life

Frequently Asked Question

Q1. Oil drain interval of engine oils?

A1. Be guided by the engine manufacturer's specifications according to automotive owner's manual or recommendations. They are carefully assess the operating conditions of engine, allowing for peaks in the speed, load and operating temperatures of oil and cooling system.

Q2. What happen if I use low performance oil where higher performance oil is recommended by the engine manufacturer?

A2. Initially, nothing will happen, provided the viscosity grade is correct. However, the oil would soon lose alkalinity (corrosion wear) and thicken due to oxidation. Premature filter blocking could be expected owing to lower dispersancy, and valve train wear may increase due to the lower anti-wear performance of the oil. Piston ring sticking may also occur, oil consumption will increase and, ultimately, engine life will be reduced.

Q3. What happen if I use high performance oil where lower grade oil was being used?

A3. Initially, nothing will happen, provided the viscosity grade is correct. Some heavy contamination of the oil may occur during the first one or two fills. This is because the higher detergency / dispersancy performance will clean out much of the sludge and deposit in the engine which accumulated when using low performance oil. However, the engine will be cleaner inside and stuck piston rings may be freed up.

Q4. Oil colour changed to black?

A4. Don't worry about the engine oil turning black. It will lose its yellow colour within a few hundred kilometre of being put in to the engine. That doesn't mean it's not working. Quite the contrary - it means it is working well. It changes colour as it traps oxidation oil, deposits and the flakes of metal that pop off heavily loaded engine parts.

Q5. Operating Limit of oil?

A5. Lubricant oils must be observed and monitored regularly. Generally you can observe with apparent of oil with colour and odour. There are test items for monitoring, such as viscosity, flash point. If necessary, there is other test items can be added.

Warning Limits for Diesel Engine Oil (SAE 15W-40)

Items	Units	Method	Warning Limit	Remarks
K. Viscosity, @ 100°C	cSt	D 445	< 12, 18 <	Most important item
Flash Point	°C	D 93	< 190	
Insolubles, Pantane	wt%	D 893	1.0 <	
TAN	mgKOH/g	D 2896	> 5	
Water, Distillated	vol%	D 95	0.2 <	
Metal Contents	ppm	ICP	Al : 20 <	
			Cu : 40 <	
			Fe : 100 <	
			Pb : 30 <	
Apparent			No contamination, No gelling substance, etc	

* It should be recognized that these operating limits can serve only as general guidelines.

Q6. Should I use higher viscosity oil for older car?

A6. The gap between engine cylinder liner and piston increases and the use of lower viscosity oil might result in low pressure phenomenon thus the use of higher viscosity oil in older car is possible.