

Green Premium Long Life Pre-Mix Coolant (LLTU)

Nulon Premium Long Life Pre-Mix Coolant – Green (LLTU) is a pre-diluted, ready to use 33.3% mix of Nulon Long Life Concentrated Coolant (LL) and 66.6% demineralised water. LLTU is formulated to be used in either of two ways:

1. Add as a top-up to any cooling system that contains Nulon Long Life Concentrated Coolant (LL). (Note: If a vehicle manufacturer specifically recommends a 50/50 mix, it will be necessary to use a 50/50 mix of Nulon LL and demineralised water. When using as a top-up, always remember that the coolant should be changed according to the amount of work the original coolant in the system has done.
2. Use as a complete fill product. This is particularly advantageous in areas where water is of poor quality, or is very hard, such as Perth and Adelaide.

All performance characteristics of Nulon Premium Long Life Pre-Mix Coolant – Green (LLTU) are exactly the same as for Nulon Long Life Concentrated Coolant (LL) when LL is mixed 1 part to 2 parts demineralised water.

Nulon Premium Long Life Pre-Mix Coolant – Green (LLTU) offers long-term cooling system protection for all motor vehicles. Nulon LLTU is based on Hybrid Additive Technology (HAT), which is a blend of organic and inorganic additives. The advantage of this product over conventional ethylene glycol type coolants is that the corrosion-inhibiting package has minimal depletion over an extended period of time. This means that maximum corrosion, anti-freeze/anti-boil protection are maintained until the fluid is replaced at the recommended 500,000 kilometres or 6 years (whichever comes first).

Nulon LLTU is to be used direct from the container and not diluted. Nulon LLTU protects for 6 years or 500,000km and is safe to use in all Commodores and Ford Falcons (including all V series Commodores and AU to FG/FG X Falcons).

Nulon LLTU is a low silicate formulation containing no nitrite, phosphate or amine. These chemicals are often used in conventional coolants and have limitations in performance, protection afforded, and vehicles to which they are suited. Nulon LLTU is guaranteed suitable for use in all vehicles where the manufacturer specifies anti-freeze/anti-boil coolant.

Nulon LLTU's formulation is approved by Ford Australia (ESE-M97B44-A specification) for initial fill in all Australian manufactured 6 and 8 cylinder vehicles. This specification is recommended by Ford for all in-warranty and post-warranty servicing of Ford vehicles where a glycol based coolant is required.

Benefits

- 6 years or 500,000 km service life (whichever comes first)
- Guaranteed to suit every vehicle
- Provides optimum protection against corrosion of all metals in vehicle cooling systems
- Compatible with hoses and rubber fittings
- Expands operating temperature range of cooling systems
- Eliminates the need for supplemental coolant additives (SCA) in diesel engines
- Reduces the incidence of nucleate or hot spot boiling
- Not aggressive to water pump seals as is often the case with high silicate content coolants
- Performance of organic additive based inhibitors does not diminish with time
- Reduces inventory for fleet operators

Applications

Nulon LLTU is recommended for the protection of cooling systems of all petrol engines and heavy and high-duty diesel engines operating in on-road, off-road or stationary conditions. LLTU provides maximum protection against cavitation erosion of wet cylinder liners in diesel engines. Refer to Nulon Fact Sheet No.108 for more information re diesel engine applications. (Note: for maximum protection, particularly in heavy-duty diesel applications, use Long Life Concentrated Coolant (LL) at 50% volume with clean soft or demineralised water).

LLTU is guaranteed to be suitable for the protection of cooling systems of all passenger vehicles where an anti-freeze/anti-boil coolant is specified. Nulon LLTU is also suitable for older vehicles where a broader cooling system operating temperature range is desired, or as a replacement for conventional corrosion inhibitors.

Note: Where a manufacturer specifies Organic Additive Technology (OAT) long life coolant, use either of Nulon's Red Long Life Coolants.

Recommended step-by-step guide for changing coolants

1. Before proceeding, read your owner's manual as some vehicles may have special requirements.
2. Check that all hose connections are tight. Also check the condition of all hoses, fittings and belts.
3. Use Nulon Radiator Flush and Clean (R40) to ensure that the radiator and engine are as clean as possible. This ensures maximum coolant life.
4. R40 should be added to the old coolant. With the heater on, run the engine, or drive for 20 minutes minimum, 1 hour maximum.
5. Stop the engine and allow it to cool. Remove the bottom radiator hose or drain plug to drain out all the old coolant. It is important to rinse out all traces of old coolant from the engine block and heater circuit. To best achieve this refill the system with clean water - run the engine up to operating temperature and when it is cool drain and flush again. This will ensure a clean environment for

the new coolant.

6. Check the cooling system capacity of the vehicle and add the required dose of Nulon Concentrated Coolant (do not pre-mix), then fill with soft clean or demineralised water. Any leftover product can be pre-diluted and used as a top-up.
7. Some vehicles may require "air bleeding" to remove trapped air from the heater circuit and cylinder head. An air bleeding screw is located on the engine of some vehicles for this purpose. If you are unsure about this procedure please seek further advice before proceeding. Removing the return heater hose from the water pump to establish water flow, whilst topping up, will assist in reducing "air locks". Note: air locks can cause severe engine damage.
8. Start the engine and monitor coolant level and temperature until the thermostat opens and the vehicle reaches operating temperature.
9. When the vehicle cools down re-check the coolant level.

Note: This check sheet should be used as a guide only. Some vehicles may have special requirements that are not noted above. We strongly advise that you read your owner's manual or relevant workshop manual before proceeding with a coolant change.

Physical Properties

Property	Nulon LLTU
Density (g/ml at 20°C)	1.053
Freezing point, °C	-18
Boiling point °C	105
pH	7.7
Reserve alkalinity (ml)	6



Chloride Ion (mg/L)	<10
Foaming: Height (ml)	45
Break Time (seconds)	2
Shelf life	3 years
Colour	Green
Odour	Characteristic
Glycol content (grams per litre)	346
Coolant hose test (SAE J20)	Pass

Temperature protection chart (using 105 kPa radiator cap)

Boils at	127°C
Freezes at	-18°C

Simulated Service Test (ASTM D 2570)

Metal	*AS/NZS 2108.1:2004	**Result for Nulon LLTU
Copper	20	1
Solder	60	1
Brass	20	2
Steel	20	0
Cast iron	20	1
Aluminium	60	1

*Maximum allowed weight loss (mg)
**Actual weight loss (mg)

Glassware Corrosion Test (ASTM D 1384) S

Metal	*AS/NZS 2108.1:2004	*ASTM D 3306	Result for Nulon LLTU
Copper	10	10	1
Solder	15	30	1
Brass	10	10	0
Steel	10	10	1
Cast iron	10	10	2
Aluminium	15	30	1

* wt. loss mg (max)

Water Pump Cavitation Erosion Test (ASTM D 2809)

Metal	AS/NZS2108.1:2004 (rating out of 10)	Typical result for Nulon LLTU
Cast aluminium	8 minimum	9

Aluminium Heat Rejection Corrosion Test (ASTM D 4340)

Nulon LLTU Corrosion rate (mg/cm ² /week)	AS/NZS 21008.1:2004 (max allowable rate, mg/cm ² /week)
0.17	1.0

First Aid

If poisoning occurs contact a doctor or the Poisons Information Centre in Australia 131 126, or New Zealand 0800 764 766. If swallowed do NOT induce vomiting. If in eyes, hold eyelids apart and flush the continuously with running water. If skin contact occurs, flush with running water.

Meets or exceeds the following oil industry specifications	
AS Claims	AS 2108-2004 Type A, AS 2108.84
ASTM	ASTM D1384, ASTM D2570, ASTM D2809, ASTM D3306, ASTM D4340, ASTM D4656, ASTM D4985, ASTM D5345

Meets or exceeds the following oil industry specifications

BMW	BMW (UK)
Detroit	Detroit Diesel Allison 7SE298
Ford	ESE M97-B18C, ESE M97-B44A
GM	GM 1825M, GM 1889M
Holden	HN 2043, HN 2217
Madza	Mazda MES MN 121D
Mercedes Benz	Mercedes Benz DBL 7700
Nissan	Nissan NES M 5509
Other Claims	BS 6580:1992, JIS K2234 (Japan)
Saab	SAAB FSD 8704
Society of Automotive Engineers	SAE J1034
Toyota	Toyota K2601G
Volvo	Volvo (UK)

Pack Sizes



Part No: LLTU1
1 Litre - 12 per carton
Barcode: 9311090001039



Part No: LLTU5
5 litres - 3 Per Carton
Barcode: 9311090000803



Part No: LLTU10
10 litres - Single Unit
Barcode: 93110900006041