Red Premium Long Life Coolant 100% Concentrate

Nulon Red Premium Long Life Coolant 100% Concentrate (RLL) provides the ultimate anti-freeze/anti-boil and corrosion protection for most late model vehicles, including petrol, diesel and heavy duty diesel applications. Red Long Life Coolant incorporates the most up to date Organic Additive Technology (OAT) carboxylate corrosion inhibitors. Red Long Life Coolant is nitrite and amine free to meet US requirements, phosphate free to meet European requirements and silicate free to meet Japanese requirements. Nulon RLL's carboxylate inhibitor package is more stable and stays in solution better than traditional coolants. This provides an extended shelf life of 8 years. Nulon RLL will not form solids inside cooling systems, or become abrasive to water pump seals. All of this means that RLL provides maximum corrosion and anti-freeze/anti-boil protection for up to 8 years or 500,000 km, (whichever comes first).

Nulon Red Premium Long Life Coolant 100% Concentrate is the preferred coolant to use in cooling systems that are fitted with aluminium radiators. It is a genuine 100% OAT based, long life coolant. RLL is dyed its distinct red/orange colour to instantly distinguish its unique chemistry from traditional green coolants. It should not be mixed with other coolants. As it is a concentrated coolant, it is to be used at 50% by volume in soft or demineralised water. Nulon RLL provides maximum protection against cavitation erosion of wet cylinder liners in diesel engines. Red Premium Long Life Coolant 100% Concentrate is not recommended for use in cooling systems that have a copper/brass radiator (in such vehicles, use Nulon LL, which is green). If changing from any other coolant to Red Premium Long Life Coolant 100% Concentrate, always thoroughly flush the system first as cross contamination will reduce the life of Red Premium Long Life Coolant 100% Concentrate.

Benefits

- 8 years or 500,000 km service life (whichever comes first) when used at 50% V/V mix
- Guaranteed to suit every vehicle where red/orange OAT based coolant has been specified
- Provides optimum, long term protection against corrosion of all cooling system metals
- 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 silicate based coolants
- Performance of OAT inhibitors does not diminish with time
- Particularly effective in controlling cavitation erosion of wet cylinder liners in diesel engines

Applications

Nulon RLL is recommended for use in all vehicles that use a red or orange coloured coolant. Nulon Red Premium Long Life Coolant 100% Concentrate is principally designed for use where OAT coolant is required. It is particularly suited for use where AS/NZS 2108.1:2004 Type A, GM6277M or Toyota TSK2601G specifications are cited. Use in all cooling systems as a replacement for any red/orange coloured coolant. Among specific makes of vehicles that use red/orange coolant are Ford Falcon EA - EF, Holden Gen 3 & Gen 4 V8's and Alloytech V6, all Toyota models, Audi (some models), VW (some models), Jeep (most models), Chrysler (most new imports have red), Isuzu trucks, Daihatsu cars and trucks and Caterpillar.

Recommended step-by-step guide for changing all concentrated 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 or 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, then run the engine up to operating temperature and when it is cool drain and flush it 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 RLL
Density (g/ml at 20°C)	1.114
Freezing Point (50% v/v in water) °C	-37
Boiling Point (undiluted) °C	>160
Boiling Point (50%v/v in water) °C	130
Reserve Alkalinity (ml)	5
Glycol content (grams per litre)	1090
pH (50% v/v in water)	8.5
Foaming Volume, ml Break Time, seconds	45 max 5 max

Temperature protection chart			
Mix ratio	Makes	Boils at	Freezes at
50%	1 litre makes 2 litres	128 °C	-37°C

Glassware Corrosion Test (ASTM D 1384)

Metal	AS/NZS 2108.1:2004 wt. loss mg (max)	Typical result for Nulon LL
Copper	10	2
Solder	15	+2
Brass	10	2
Steel	10	+1
Cast iron	10	+3
Cast aluminium	15	4

Simulated Service Test (ASTM D 2570)

Metal	AS/NZS 2108.1:2004 wt. loss mg (max)`	Typical result for Nulon LL
Copper	20 (max wt. loss)	5
Solder	60	+1 (gain)
Brass	20	4
Steel	20	1
Cast iron	20	+2 (gain)
Aluminium	60	1

Water Pump Cavitation Erosion Test (ASTM D 2809)

Metal	GM 1825M (rating)	ASTM D 3306 (rating)	Typical result for Nulon LL
Cast aluminium	8 min	8 min	9

Aluminium Heat Rejection Corrosion Test (ASTM D 4340)

Nulon RLL Corrosion rate (mg/cm2/week)	AS/NZS 21008.1:2004 (max allowable rate, mg/cm2/week)
0	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
ASTM	ASTM D1384, ASTM D2570, ASTM D2809, ASTM D3306, ASTM D4340, ASTM D4656, ASTM D4985, ASTM D5345
Audi	Audi G12+, Audi G12
BMW	BMW (UK)
Chrysler	Daimler Chrysler MS-7170, Daimler Chrysler MS-976
Ford	ESE M97-B18C, ESE M97-B44A, ESE M97-B44D, WSS-M97B44-D
GM	GM 1825M, GM 1899M, GM 6277M
Honda	Honda All Season Type 2, Honda Longlife Coolant Type 2
Madza	Mazda MES MN 121D
Mitsubishi	Mitsubishi ES-X64217
Nissan	Nissan NES M 5509
Other Claims	BS 6580:1992, JIS K2234 (Japan)
Paraflu	Paraflu UP
Society of Automotive Engineers	SAE J1034
Toyota	Toyota K2601G, TOYOTA SUPER LONG LIFE COOLANT
Volvo	Volvo (UK)
VW	VW G12+, VW G12

Pack Sizes

Part No: RLL5
5 litres - 3 Per Carton
Barcode: 9311090000766

Part No: RLL2.5
2.5 Litres - 6 Per Carton
Barcode: 9311090000773

Part No: RLL20
20 litres - Single Unit
Barcode: 9311090000780