



Shell Superior Long-Life antifreeze/Coolant

Tropical Formula (TF) Ready-to-Use premium quality Pre-Diluted Antifreeze/ Coolant that has been tested to be compatible with all automotive and light duty truck antifreeze/ coolant products available in the market today.

Shell Superior Long-Life Antifreeze/Coolant is based on Shell's proprietary hybrid organic acid technology and has been specifically designed for complete mixed use. It can be used in all makes and models of passenger vehicles, light duty and heavy duty diesel applications. Shell Superior Long-Life Antifreeze/Coolant not only guards against freezing and boil-over, it also provides critical protection against corrosion.

Applications

Shell Superior Long-Life Antifreeze/Coolant is a low silicate, organic additive, ethylene glycol based, extended service product, which is free of phosphates, borates, nitrites and amines. It will provide extended protection against rust, corrosion and pitting caused by cavitation for all coolant system metals, including aluminium. It also provides protection against wet sleeve liner cavitation and is compatible with the flux found in controlled atmosphere brazed (CAB) radiators.

Shell Superior Long-Life Antifreeze/Coolant offers excellent protection against temperature extremes, preventing freezing and boiling when used with no additional water. This product does not impart any significant color change if mixed with another engine coolant. The superior performance and stability of Shell's premium extended life corrosion inhibitors allows them to go on working well beyond the lifetime of traditional products. As sold it is ready for use - **do not add water.**

Performance Features and Benefits

When Shell Superior Long-Life Antifreeze/Coolant is added as an initial fill and properly maintained in accordance with engine manufacturer's maintenance recommendation, it will provide up to 250,000km (150,000 miles) or 5 years of service life protection in automotive application and up to 1,000,000km (600,000

miles) or 6 years of service life protection in heavy duty diesel use.

- Complete mixed fleet use; automotive, light and heavy duty diesel
- Borate, nitrite, amine and phosphate free
- Add as top-up to any colour antifreeze
- Protects coolant system metals such as brass, copper, solder, steel, cast iron and aluminium
- Protects against wet sleeve liner cavitation
- Enhanced water pump performance
- Fully compatible with inorganic, hybrid and organic acid coolant technologies
- Compatible with CAB radiators
- Extended service life

Specifications and Approvals

Recommended applications:

General Motors
Ford
Honda
Chrysler
Mercedes-Benz
Toyota
VW
Nissan
Hyundai

Suitable in mixtures with all major coolant types for service fill.

Shell Superior Long-Life Antifreeze/Coolant has been fully tested and meets and exceeds ASTM D-3306. It passes fully the following coolant tests:

ASTM D-4340 Hot Service Aluminium Protection
ASTM D-1384 Corrosion Protection
ASTM D-2809 Water Pump Cavitation
ASTM D-1881 Foaming Characteristics





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ASTM D-2570 Metal Protection

Health & Safety

Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from your Recochem representative.

Protect the Environment

Take used coolant products to an authorised collection point. Do not discharge into drains, soil or water.

Extended Shelf Life

This product is to be stored undercover, in dry conditions at ambient temperature below 30°C, and away from direct sunlight and possible moisture ingress.

When stored under such conditions, with the cap and packaging remained sealed, then the shelf life of the product is 5 years. Once opened and unsealed, the product should be fully consumed as soon as possible.

Typical Physical and Chemical Characteristics

| Superior Long-Life Antifreeze/Coolant | Performance | Test Method |
|---------------------------------------|---------------|-------------|
| pH ^a | 7.5 – 9.5 | ASTM D1287 |
| Specific gravity ^b | 1.010 – 1.020 | ASTM D1122 |
| Freeze point ^a , °C | -8 | ASTM D1177 |
| Foam volume, ml | 150 max. | ASTM D1881 |
| Foam break time, second | 5 max. | ASTM D1881 |
| Reserve Alkalinity, ml | 1.0 min. | ASTM D1121 |
| Chloride, ppm | 25 max. | ASTM D3634 |
| Colour | Pale Yellow | |
| Glycol Content (vol.%). | 8 min. | |
| Silicon, from silicate (ppm) | 90 max. | ASTM D6130 |
| Boron (ppm) | < 10 | |
| Phosphorous (ppm) | < 10 | |

^a as is

^b Measured at 15.6°C/60°F

These characteristics are typical of current production. Whilst future production will conform to Recochem’s specification, variations in these characteristics may occur.

