

PRISTA® ANTIFREEZE G12++ concentrate

AUTOMOTIVE FLUID

Description and application

PRISTA® ANTIFREEZE G12++ concentrate is antifreeze concentrate based on ethylene glycol and an additive system developed with salts of organic acids and silicates (Si-OAT coolant). PRISTA® ANTIFREEZE G12++ concentrate is free from nitrites, amines, phosphates and borates.

PRISTA® ANTIFREEZE G12++ concentrate can be used all-year-round for protection against freezing, overheating, and corrosion and deposits in the cooling system with its vital parts, the coolant channels in engine block and cylinder head, the radiator, the water pump and the heater core of the engines of passenger cars, trucks, buses, off-road vehicles, stationary and marine engines, etc. It is used only after dilution with distilled or soft water. For durable corrosion protection, it is recommended to use at least 33 % v/v of PRISTA® ANTIFREEZE G12++ concentrate in distilled water. The typical mixing ratio is 1:1, offering protection against freezing at ambient temperatures down to minus 40 °C. Mixtures with more than 70 % v/v PRISTA® ANTIFREEZE G12++ concentrate in water are not recommended.

Specifications

| | |
|--------------|-----------------------|
| ASTM | D 3306/D 4985 |
| AS | 2108-2004 |
| AFNOR | NF R15-601 |
| SAE J | 1034 |
| CUNA NC | 956-16 |
| FFV | Heft R 443 |
| UNE | 26361-8 |
| Deutz | DQC CC-14 |
| Liebherr Min | LH-01-COL3A |
| Cummins | 14603 |
| MTU | MTL 5048 |
| BS | 6580:2010 |
| VW TL 774-G | Pass the requirements |
| MB | 325.5/325.6 |
| MAN | 324 Typ Si-OAT |

The table below summarizes frost protection of PRISTA® ANTIFREEZE G12++ concentrate after dilution with distilled water

| PRISTA® ANTIFREEZE Antifreeze type G12++ concentrate,% v/v | Distilled or deionized Water, % v/v | Freezing Protection down to temperature*, °C ASTM D 1177 |
|--|---|---|
| 33 | 67 | - 17 |
| 40 | 60 | - 25 |
| 50 | 50 | - 40 |
| 60 | 40 | - 55 |
| 70 | 30 | - 70 |

*Note - This temperature is the average value of the Initial Crystallization Temperature and the Pour Point. The exact value of the Freezing Temperature is determined in a laboratory. Approximate values can be obtained by refraction meters and hydrometers calibrated for ethylene glycol-based coolants.

Typical characteristics

| Parameter | Test Method | Typical Value |
|---|-------------|---------------|
| Appearance | Visual | Clear fluid |
| Colour | Visual | violet |
| Relative Density at 15.5 °C | ASTM D 1122 | 1.12 |
| Initial Boiling Point, °C | ASTM D 1120 | 170 |
| Initial crystallization point**, °C | ASTM D 1177 | minus 37 |
| pH** | ASTM D 1287 | 8.2 |
| Foaming properties*** - Foam Volume, ml - Break Time, s | ASTM D 1881 | 20 0 |

| Parameter | Test Method | Typical Value |
|---|-------------|---------------|
| Alkalinity, cm ³ | ASTM D 1121 | 9.6 |
| Corrosion in Glassware***, weight loss, mg/specimen | ASTM D 1384 | |
| - Copper | | 0 |
| - Solder | | 1 |
| - Brass | | 0 |
| - Steel | | 0 |
| - Cast Iron | | 0 |
| - Aluminium | | 1 |

** measured after dilution of Antifreeze concentrate in distilled water in ratio 1:1.

*** measured on 33% v/v of Antifreeze concentrate in distilled water

Important note: typical data values do not constitute a specification but are an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved.

Health, safety and handling

This product is classified as dangerous and requires special labeling. The use of this product should be in accordance with the guidelines for safe handling in the safety data sheet. Product shelf life is at least five years when stored in originally closed, air-tight containers at temperatures of maximum 30C. Do not use galvanized containers for storage because they may corrode.