

GOLDENSTONE® ANTIFREEZE LONG LIFE

Technical Data Sheet (TDS)

AUTOMOTIVE FLUID

Description and Application

GOLDENSTONE® ANTIFREEZE LONG LIFE is antifreeze concentrate based on ethylene glycol and an additive system developed with silicate-free organic (mono- and di-carboxylic) acids. The product is free from potentially harmful substances such as nitrites, amines and phosphates which makes it environmentally friendly.

GOLDENSTONE® ANTIFREEZE LONG LIFE is used for year-round protection against freezing, overheating and corrosion of the engines of passenger cars, trucks, buses, off-road vehicles and stationary and marine engines and etc. It should be used only after a proper dilution with distilled or soft water before use.

Except for all conventional combustion engines it is also especially good for the high-tech ones, because it provides the so vitally crucial high temperature corrosion protection for the aluminium heat transfer surfaces there.

In order to provide good and durable corrosion protection it is recommended to use at least 33 %v/v of GOLDENSTONE® ANTIFREEZE LONG LIFE in distilled water. Typical mixtures are 1:1, offering frost protection at ambient temperatures down to -40°C. Mixtures with more than 70 %v/v GOLDENSTONE® ANTIFREEZE LONG LIFE in water are not recommended.

The maximum frost protection (about -69°C) is obtained at 68 %v/v of GOLDENSTONE® ANTIFREEZE LONG LIFE in water.

GOLDENSTONE® ANTIFREEZE LONG LIFE products allow extended drain intervals thanks to the special organic additives used in the formulation and their minimum depletion during service. The recommended drain intervals are as follows:

- Passenger cars - 250,000 km or 2,000 hours
- Heavy duty trucks, buses and other commercial vehicles - 650,000 km or 8,000 hours
- Stationary engines - 32,000 hours or 6 years

Specifications

ASTM	D 3306/D 4340/D4985/D5345
MB	325.3
MAN	324 Type SNF
SAE J	1034
VW	TL774-F (G12+)
VOLVO	1286083
MTU MTL	5048
OPEL	GM 6277M

The table below summarizes different dilutions of GOLDENSTONE® ANTIFREEZE LONG LIFE in distilled water and the relevant "Freezing Protection" they will ensure:

PRISTA® Antifreeze Long Life, % v/v	Distilled or Soft Water, % v/v	Freezing Protection down to Temperature*, °C
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 value and the Pour Point value. 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

Typical Characteristics

Parameter	Test Method	Typical Value
Appearance	Visual	Clear fluid
Colour	visual	Pink-red, fluorescent

Parameter	Test Method	Typical Value
Relative Density at 15.5°C	ASTM D 1122	1.12
Initial Boiling Point, °C	ASTM D 1120	163
Initial crystallization point**, °C	ASTM D 1177	minus 37
pH**	ASTM D 1287	8.5
Foaming properties** - Foam Volume, ml - Break Time, s	ASTM D 1881	20 0
Alkalinity, cm ³	ASTM D 1121	4.5
Corrosion in Glassware*** - Weight Loss, mg/specimen - Copper - Solder - Brass - Steel - Cast Iron - Aluminium	ASTM D 1384	1.9 1.0 1.6 -0.5 -1.4 4.6

** measured on 50 %v/v of Antifreeze concentrate in distilled water *** 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

For more information about product MSDS, terms and conditions for storage and shelf life please visit:

www.goldenstoneoils.com

Packages

1L, 4L, 210L