marine lubricants

Delo® XLC Antifreeze/Coolant – Concentrate

Regional equivalents: Havoline Xtended Life Coolant – Concentrate

Description

Delo® XLC Antifreeze/Coolant – Concentrate (Delo XLC) is a non-nitrited cooling fluid and corrosion inhibitor for combustion engines and heat transfer systems. Delo XLC is an ethylene glycol-based fluid that helps to provide maintenance-free protection against freezing, boiling and corrosion. With patented silicate-free aliphatic acid technology, Delo XLC encourages long-life corrosion protection for all engine metals, including aluminum and ferrous alloys. During extensive fleet testing Delo XLC has proven to provide protection for at least 32.000 hours in stationary engines.

Typical Characteristics

MPID	219900	
Ash content, mass %, ASTM D 1119	1.1	
Nitrate, amine, phosphate, borate, silicate	Nil	
Colour	Orange	
Density at 20°C, kg/l, ASTM D 1122	1.11	
Equilibrium boiling point, °C, ASTM D 1120	172	
Reserve alkalinity (pH 5.5), ASTM D 1121	6.2	
Shelf life of the concentrated product stored in original and unopened containers at the recommended temperature window	8 Years	
	50% Dilution	**33% Dilution**
pH, ASTM D 1287	—	8.3
Foaming properties at 25°C, break time, sec., ASTM D 1881	5	—
Freeze protection, °C	–37	–20
Effect on non-metals, GME 60 255	None	None
Staining characteristics, ASTM D 1882	—	None
Hard water stability, VW PV 1426	No precipitate	—

Recommended Applications

Delo XLC provides long-life freeze and corrosion protection. To ensure good corrosion protection it is recommended to use at least 33 volume percent of Delo XLC in solution. Delo XLC may be used in engines manufactured from cast iron, aluminum or a combination of the two metals, and in cooling systems made of aluminum or copper alloys. Delo XLC is compatible with most other ethylene glycol-based cooling water treatments. The use of soft water is preferred for dilution, though lab testing has shown that acceptable corrosion results are still obtained with water of 20°dH, containing not up to 500 ppm chlorides and 500 ppm sulphates.

Delo XLC Is Approved For:

- ☑ **Deutz/MWM** 0199-2091
- ☑ **MAN Diesel** D36 5600
- ☑ **WinGD (formerly Wärtsilä)**
- ☑ **Rolls-Royce** 2.13.01
- ☑ **Wärtsilä Finland** 32-9011
- ☑ **Caterpillar-MaK** A4.05.09.02

Delo XLC Is Suitable For Use In:

- ☑ **Deutz** Stationary Diesel Engines
- ☑ **GE – Jenbacher** Stationary Natural Gas Engines
- ☑ **MTU** 2000/4000 Diesel Engines
- ☑ **Wärtsilä** Stationary Diesel Engines
- ☑ **European HD OEMs** requiring both phosphate-free and nitrite-free formulations
- ☑ **Japanese HD OEMs** requiring silicate-free formulations

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Delo XLC Meets The Requirements Of:

- ☑ **ASTM** D3306
- ☑ **ASTM** D6210
- ☑ **DAF** 74002
- ☑ **Detroit Diesel** DFS93K217
- ☑ **MAN** 324 Type SNF
- ☑ **Mercedes Benz** 325.3 under DBL 7700.30
- ☑ **MTU** MTL 5048
- ☑ **TMC** RP 364

Performance Benefits

1. Corrosion Protection
Provides long-life protection against most forms of corrosion on the majority of all metals including the aluminum heat transfer surfaces contained in modern engines.

2. Cavitation Protection
Offers cavitation protection without using nitrite or nitrite-based supplemental coolant additives (SCAs).

3. Seal Compatibility
Has no adverse effect on rubber hoses and gasket materials as shown in testing a wide range of seal materials.

4. Heat Transfer Efficiency
The carboxylic acid inhibitor forms a targeted mono-molecular protective layer on metal surfaces, thus helping to provide efficient heat transfer.

5. Economics
Corrosion protection and low additive depletion often results in in less maintenance and repair costs.

Our Family of Brands