Product information

Longlife Cooling Fluid ï 38°C G12+

Cooling Fluid ï 38°C G12+ is a ready to use mixture of longlife anti freeze and demineralised water and is used as a heat transferring liquid in combustion engines based on Organic Acid Technology (OAT) technology in ethylene glycol. The heat of the internal combustion is transferred to the radiator where the mixture is cooled by means of air flow. **Cooling Fluid ï 38°C G12+** provides maintenance-free freezing and corrosion protection throughout the life of the engine or vehicle.

Using patented silicate-free aliphatic combination of mono- and di-carboxylic acid has proven to provide superior protection for as much of 700.000 km on-road or as long as 8000 hours off-road.

Properties

1.Corrosion protection
Cooling Fluid ï 40C provides long-life corrosion protection by use of optimized and patented organic corrosion inhibitors against all forms of corrosion. Excellent and lasting high temperature corrosion protection is provided for the aluminium transfer surfaces contained in modern engines. **Cooling Fluid ï 38°C G12+** offers excellent cavitation protection without nitrite.

2.Heat transfer effinciency
The carboxylic acids form a single layer of protective molecules. This provides a much more efficient heat transfer compared to the traditional silicate layers.

3.Low depletion rates
The inhibitors contained in **Cooling Fluid ï 38°C G12+** have very low depletion rates unlike the traditional nitrite and silicate based technologies. **Cooling Fluid ï 38°C G12+** provides protection against localized corrosion and cylinder liner cavitation without the use of supplement coolant additives. Extended coolant life, often for the life of the engine or vehicle, is obtained trough the use of virtually non-depleting corrosion inhibitor.

4.Economics
The outstanding corrosion protection and the low depletion of the inhibitors, naturally result in less refilling and less maintenance costs e.g. Fleet tests have demonstrate that the average pump life increased with 50%.

5.Stability

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Traditionally, coolant formulations have included silicates for high temperature corrosion protection of aluminium heat transfer surfaces. However, silicates can use cause stability problems and are subject to rapid depletion in service and therefore not readily acceptable for inclusion in fill-for-life cooling systems. Because of the nature of the inhibitors. **Cooling Fluid ï 38°C G12+** demonstrates outstanding stability, even in the most demanding circumstances.

6.Frost protection
Cooling Fluid ï 38°C G12+ is a modern engine coolant concentrate based on ethylene glycol.

7.Boiling protection
Cooling Fluid ï 38°C G12+ minimizes coolant boiling by increasing the boiling point and providing extra protection during hot summer periods or during severe vehicle operation, such as mountain driving or caravan towing.

8.Miscibility
Cooling Fluid ï 38°C G12+ is compatible with other coolants based on ethylene glycol. Exclusive use of **Cooling Fluid ï 38°C G12+** is recommended for optimum corrosion protection and sludge control.

9.Seal compatibility
Cooling Fluid ï 38°C G12+ provides excellent seal compatibility. The coolant has no effects on rubber hoses and gasket materials.

10.Hard water stability
Free of silicates, **Cooling Fluid ï 38°C G12+** satisfies all major standards and requirements of the major European car and truck manufactures.

11.Toxicology & environmental aspects
Cooling Fluid ï 38°C G12+ is based on non-toxic inhibitors and is fully biodegradable. The extended life of the product contributes to the protection of the environment.

Standards and approvals
Cooling Fluid ï 38°C G12+ satisfies or exceeds all major standards. Approvals of the major European car and truck manufacturers are available or pending.

Application
Cooling Fluid ï 38°C G12+ provides long-life frost and corrosion protection.

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Cooling Fluid ï 38°C G12+ may be used with confidence in engines manufactures from cast iron, aluminium or combinations of the two metals, and in cooling systems made of aluminium or copper alloys.

Cooling Fluid ï 38°C G12+ is particularly recommended for advanced engines, where high temperature aluminum protection is important.

Specifications

Mercedes-Benz/Daimler Chrysler MB 325.0,
MB 325.2, MB 325.3,
Volkswagen TL-VW 774 D (G12) , TL-VW 774 F (G12+)
Cummins, DAF 74002,
Deutz-MWM Detroit Diesel (incl. Powercool
plus), 0199-99-1115 / 0199-99-2091
Ford WSS-M97B44-D, Landrover, Aston Martin, Jaguar
General Motors B0401065 en Saab/Opel GM6277M
Mazda, MG-Rover, PSA, Mitsubishi Suzuki, Yanmar, Daewoo, Nissan
MAN 324 Typ SNF,
Volvo Trucks
Renault Type D, Scania TB1451
Fiat 9,55523 / Iveco standard 18-1830
BS 6580, BR-637, SAE J1034
ASTM D3306/D4656/D4985
JASO M325, NATO S-759, JIS K2234
Fendt, John Deere JDMH5
Behr, Jenbacher, ADE, MAK
MTU MTL 5048
Isuzu, Komatsu, Karosa
Leyland-DAF, Wärtsilä
Liebherr
JIS K2234 Class 2 (LLC)

Specific data

Water content weight %	max. 53	
pH	7,0 - 7,6	
C Specific gravity, 15°C	1.110 to 1.145	ASTM D5931
Specific gravity, 20°C	1.113 typ.	ASTM D5931
Equilibrium boiling point	>140°C typ	ASTM D1120
Reserve alkalinity (pH 5.5)	3.1 typ.	Report ASTM D1121
pH, 20°C	8.6 typ.	ASTM D1287
Refractive Index, 20°C	1.430 typ.	ASTM D1218
Foaming @25°C	50ml typ.	ASTM D1287
break time	5 sec typ.	
Initial freezing	<-37°C	ASTM D1177

Article number 83351
Content 1 litre

Article number 83355
Content 5 litre

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Product information

Article number 83382
Content 25 litre

Article number 83386
Content 60 litre

Article number 83392
Content 210 litre

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