

ATIGEL LONG LIFE



DESCRIPTION:

ATIGEL LONG LIFE is an antifreezing agent based of ethylenic glycol additivated with a special inhibitor pack based of organ-carbossilate. It is formulated to grant the highest protection to the cooling systems of the vehicles of the rising generation. In fact, the rising generation motors work with higher working temperature and are made of more light-alloy compounds (like aluminium or magnesium alloys).

Thanks to its innovative formulation, ATIGEL LONG LIFE has better features compared to the traditional antifreezes:

- a) Longer life: Maintenance free performance into cooling loops up to 5 years or 250.000 Kms. or more for trucks and buses / 20.000 hours in passenger cars / 32.000 hours in stationary engines;
- b) Longer storage: 5 years;
- c) No gelation phenomena during the work or storage;
- d) Reduced scales formation;
- e) Better heat exchange;
- f) Better protection into the cooling system from corrosion or scales;
- g) Doubled life for pumps, thermostats, ducts, gaskets, sleeves and radiators.

TECHNICAL SPECIFICATION AND ATIGEL LONG LIFE CHARACTERISTICS:

	ASTM F 3306 Limits	ASTM Method	ATIGEL L. L. Specification
Specific gravity at 15 °C	1,115 ÷ 1,145 g/ml	D1122	1,115 ÷ 1,125
pH (sol. 50 % in Vol.)	7,5 ÷ 11,0	D 1287	g/ml
Apparent water content	5 % max	D 1123	8,0 ÷ 9,0
Alkalinity reserve	/	D 1121	4,0 max
Ash	5 % max	D 1119	5 min.
Freezing point	-37 °C	D 1177	2,5 % max
Boiling point	163 °C	D 1120	-38 °C
Boiling point (sol. 50 % in Vol.)	107,8 °C min.	D 1120	165 °C min
Effect on finishes motor of vehicles	None	D 1882	108 °C min
Odour	Not nasty	***	None
Foamy	150/5 ml/sec. max	D 1881	Not nasty
Water solubility	Complete	***	50/3 ml/sec. max
Resistance to hard waters	***	NC956-14	Complete Clear



STANDARD AND TECHNICAL SPECIFICATION REFERENCES:

ATIGEL LONG LIFE meets or exceeds the following national and international standards (partial list):

BS 6580 (GB)	FK Heft R 443 (D)	Afnor R 15/601 (F)	ASTM D 3306 and 4985
SAE J 1034	JIS K 2234(j)	KSM 2142 (K)	NATO S 759
CUNA NC 956-16(l)	UNE 26361-88 (E)	EMPA (CH)	E/L 1415c (MIL Italy)

ATIGEL LONG LIFE meets or exceeds the following manufacturer specific provision (partial list):

VW/Audi/Seat/Skoda TL 774 D	Renault 41-01-001	Volvo (Reg. n. 260)
Mercedes MB 325.3	Ford WSS-M97B44-D	Ford ESD M 97 B49-A
Ford ESE M97B49-A	Crysler MS 9176	Opel GM QL 130100

FROST PROTECTION:

Here are the different values obtained using different concentrations of ATIGEL LONG LIFE in water:

10 % vol. :	-4 °C
20 % vol. :	-9 °C
30 % vol. :	-17 °C
40 % vol. :	-26 °C
50 % vol. :	-38 °C

CORROSION TEST OF ATIGEL LONG LIFE: ASTM D 1384 method (weight loss mg/specimen)

METALS	ASTM D 3306 Limits (mg)	ATIGEL LONG LIFE Specification (mg)
Copper	10 max	0,6
Soldering alloy	30 max	2,1
Brass	10 max	0,8
Steel	10 max	-0,1
Cast iron	10 max	-0,2
Aluminium	30 max	2,3

Reaction on rubber couplings and other plastic parts:

Thanks to its pure MONOETHYLENE GLYCOL base and to the specific formulation of its inhibitors, ATIGEL LONG LIFE is a very reliable product on non metallic materials which cooling circuits are made of.

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