

### TechnicalData

### Maxol Long Life Anti-Freeze

#### **Description:**

Maxol Long Life Anti-Freeze is an ethylene glycol based engine coolant concentrate, which uses Organic Acid Inhibitor Technology and is free from nitrites, amines, phosphates, borates and silicates. BTC Classification Type 4E. Fleet trials have shown that when used at the correct concentration coolants based on Organic Acid InhibitorTechnology continue to provide effective corrosion protection for up to 250,000km for passenger cars and 500,000km in commercial vehicles. It is recommended that the coolant is replaced when the above mileages have been reached or after 5 years which ever is the sooner. Unlike traditional coolants which employ inorganic inhibitors, Maxol Long Life Anti-Freeze has excellent hard water stability and very low inhibitor depletion rates.

#### Compatability with other coolants:

Maxol Long Life Anti-Freeze is compatible with other ethylene glycol based coolants and can be safely mixed with them. As it employs an inhibitor technology that is significantly different from that used in traditional coolants we recommend that prior to using Maxol Long Life Anti-Freeze in systems previously filled with traditional coolant that the cooling system is drained and flushed with clean water before filling with Maxol Long Life Anti-Freeze diluted in accordance with the vehicle manufacturers instructions to ensure optimum performance and durability. Failure to do so can significantly reduce the working life of the this anti-freeze.

In the absence of a vehicle manufacturers advice we would recommend a 50% dilution of Maxol Long Life Anti- Freeze in good quality water.

#### **Performance Level:**

Perrormance Level:
ASTM D3306
ASTM D 4985
SAEJ 1034
BS 6580 (2010)
AFNOR NF R15-601 *
FFV Heft R443
CUNA NC 956-16
UNE 26361 - 88
JIS K 2234 *
NATO S 759
Chrysler MS 9176
Cummins 85T8-2 & 90T8-4
Ford ESE M97B49-A, WSSM97B44-D &ESD M97
B49-A
GM 1899 M, US 6277 M &
OPEL GM QL130100
John Deere H 24 B1 & C1
Leyland Trucks LTS 22 AF 10
Mack 014GS 17004
MAN 248, 324 (SNF) & B&W D 36 5600
Mercedes MB 325.3
Renault 41-01-001
VAG TL 774D/F
VOLVO
(* with the exception of reserve alkalinity)

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#### Important:

Always observe the manufacturers specifications when selecting products.

Maxol Lubricants reserve the right to change this product specification without notice.





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**Physical Properties:** 

Parameter	Method	Maxol Long Life Anti-Freeze	ASTM D3306	
Appearance	Visual	Clear red - orange liquid free from suspended matter	Not Specified	
Specific Gravity 15/15°C	ASTM D 4052	1.119	1.110 - 1.145	
Equilibrium Reflux Boil- ing Point °C	ASTM D 1120	169	163min	
Freezing Point °C (50% Dilution by vol.)	ASTM D 1177	-40	-37max	
Freezing Point °C (33% Dilution by vol.)	ASTM D 1177	-20		
pH (50% vol.)	ASTM D 1287	8.2	7.5 - 11.0	
Reserve Alkalinity 0.1N HCl	ASTM D 1121	5.6	Report	
Water Content	ASTM D 1123	4	5 MAX	
Foaming Properties				
Vol. (ml)	ASTM D1881	50	150 max	
Break (s)	ASTM D 1881	1	5 max	

#### **Freeze Protection:**

	Concentration by Volume %					
	25	33	40	50	60	
Specific Gravity 20/4°C	1.030	1.045	1.060	1.074	1.087	
Freeze Protection * °C	-12	-22	-27	-40	-56	

<sup>(\*</sup> Average of Freezing point and pour point)

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#### **Corrosion Protection:**

#### **ASTM D1384 Glassware Corrosion Test Results.**

	Weight Loss mg/ Coupon					
	Copper	Solder	Brass	Steel	Cast Iron	Aluminium
ASTM D3306 (max)	10	30	10	10	10	30
Maxol Long Life Anti-Freeze	1.0	1.5	1.6	1.1	2.0	1.5

#### ASTM D 4340 Corrosion of Aluminium under heat rejecting conditions

	Weight Loss mg/ cm²/ week
ASTM D3306 (max)	1.0
Maxol Long Life Anti-Freeze	0.5

#### **ASTM D1384 Glassware Corrosion Test Results.**

	Weight Loss mg/ Coupon					
	Copper	Solder	Brass	Steel	Cast Iron	Aluminium
ASTM D2570 (max)	20	60	20	20	20	60
Maxol Long Life Anti-Freeze	2	3	2	2	1	5

#### **ASTM D2809 Cavitation Corrosion Characteristics of Aluminium Pumps**

	Visual Rating
ASTM D 2809 (min)	8
Maxol Long Life Anti-Freeze	9

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