



M-Cool Long Life Coolant

Long Life Organic Engine Coolant Type A

Organic Acid Technology (OAT) Coolant - (Monoethylene Glycol)

Use – M-Cool Long Life is a premium grade long life organic coolant for use in all makes and models of vehicle including automotive and heavy duty diesel

PRODUCT INFORMATION

M-Cool Long Life is a **premium quality**, organic, long life anti boil/ anti freeze coolant concentrate. M-Cool Long Life is based on carboxylate technology and contains no silicates, borates, phosphates, nitrites, nitrates or amines. M-Cool Long Life is suitable for both automotive and heavy duty diesel engines.

M-Cool Long Life contains 90% monoethylene glycol and a **double inhibitor package** ensuring ultimate corrosion protection and extended service life. Anti boil and anti freeze protection is equally afforded with a substantially higher rust and corrosion protection than competitor products. M-Cool Long Life is the ultimate in up to date coolant technology.

M-Cool Long Life protects all metals found in cooling systems and gives excellent protection against cavitation's erosion and wet-sleeve liner pitting. It significantly increases the operating life of water pumps and exceeds corrosion performance levels required to meet Australian Standard AS2108.1-2004 and numerous performance specifications of OEM's

including OEM vehicle makers. This coolant has been **independently verified** to all relevant ASTM's for automotive and heavy duty diesel use.

Provides maximum protection against 'hot spot' corrosion, common in aluminium cylinder heads.

M-Cool Long Life has a *service life* of up to 6 years / 600,000kms / 6,000hrs and a *product lifetime* of up to 1,500,000km. This has obvious environmental advantages as a result of fewer coolant changes. There are no deleterious effects on hoses or gaskets.

Has a proven record over many years with marine engines, mining equipment, taxi fleets, government departments, bus companies and large fleet truck companies.

Manufactured to colours to closely match OEM manufactured colour including green, blue, red, pink, & yellow

TYPICAL PROPERTIES

pH (50/50 vol/vol):	7.7 – 8.6	Reserve Alkalinity (ml):	4.6
Glycol by Weight (gm/L):	1.0035	Density:	1.1103 kg/L (Concentrate)
Freezing Point:	-36.2 C (50% by Vol.)	Boiling Point:	108.2 C (50% by Vol.)
Hazard Class:	Hazardous Substance	DG Class:	Non Dangerous Goods
Glassware Corrosion Test:	Pass (ASTM D-1384)	Aluminium Corrosion Test:	Pass (ASTM D-4340)
Water Pump Cavitation Test:	Pass (ASTM D-2809)	Foaming Tendencies Test:	Pass (ASTM D-1881)
Cummins Anti Scale Test:	Pass (per AES 14603)		

SERVICE & MAINTENANCE

M-Cool Long Life coolant has a service interval period of M-Cool Long Life has a *service life* of up to 5 years / 500,000kms* in automotive applications and up to 6 years / 600,000kms / 6,000hrs* in heavy duty diesels. The product has a *product lifetime* of up to 1,500,000km. To extend the service life testing and replenishing of corrosion inhibitors is necessary. For details on service life compared to product life please contact Monster Lubricants.



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TEST RESULTS AS TESTED

ASTM D 1384 - GLASSWARE CORROSION TEST

<u>Metal</u>	<u>Allowable Weight Loss</u>	<u>Typical Weight Loss M-Cool LL</u>
Copper	10mg / coupon	0.00
Solder	30mg / coupon	0.05
Brass	10mg / coupon	0.01
Steel	10mg / coupon	0.00
Cast Iron	10mg / coupon	0.03
Aluminium	30mg / coupon	0.14

ASTM D 4340 - ALUMINIUM HEAT REJECTION TEST

<u>Allowable Weight Loss</u>	<u>Typical Result M-Cool LL</u>
1.0mg / cm ² / week	-0.01

ASTM D2809 - CAVIATION EROSION CORROSION

<u>Rating (minimum)</u>	<u>M-Cool LL</u>
8	8

SPECIFICATIONS

AS 2108.1 : 2004 Type A	Mazda MES MN 1210	Komatsu KES 07.892
ASTM D3306 (EG)	Japanese JIS K 2234	Jenbacher TA 1000-0201
ASTM D6210 (EG)	SAE J 1034 and JASO M 324	Liebherr MD 1-36-130
TMC RP-330	Volvo (spec. no. 1286083)	MAN 324 Type SNF
CID-A-A52624	BMW N 600 69.0	Waukesha 4-1974D
BS 6580	Mercedes Benz MB-Approval 326.3	Saab Scania® 6901
Holden GM 6277 M/GM 1825	Nissan NES M5059	
M/GM 1899 M	Detroit Diesel 7SE298	
Ford WSS M97B44-D	Navistar CEMS B-1	
AFNOR NFR 15-601	Cummins 3666132	
Toyota Long Life TSK2601G	Saab FSD 8074/GM6277M	
Isuzu	Caterpillar 1 EO 535	
IVECO	DAF 742002/BTPS 606A/DCEA 615	
Hyundai	Freightliner 48-22880	
Volkswagen	Mack 014617004	
Subaru	Audi TL774-D/F	
British Leyland	MitsubishiES-X64217	

Meets the phosphate-free requirements of European manufacturers

Meets the silicate-free requirements of Japanese manufacturers

PRODUCT CODES / QUANTITIES

Available M-Cool Long Life -50 in Premix 50%

M-COOL-LL-50/200 200L Metal Drum
(Premixed with Demineralised Water)

Available M-Cool Long Life Concentrate

M-COOL-LL-200 200L Metal Drum