



MANNOL Antifreeze AF12+ Longlife 4112

A carboxylated (organic – OAT Organic Acid Technology) concentrated antifreeze intended for a year-round use in any modern cooling system for which the use of ethylene-glycol-based antifreeze is recommended. It ensures a reliable protection of any cooling system.

Product properties:

- It ensures a reliable protection of metals and alloys (brass, copper, alloy-treated steel, cast iron, aluminium) from all forms of corrosion, as well as prevents a high-temperature corrosion of aluminium surfaces of modern engines. It provides sufficient anti-corrosion properties from the concentration as low as 20%;
- It has an exceptional thermal stability. It protects from deposit formation;
- It has excellent heat conductivity properties and a resistance to foam formation;
- It is neutral to inserts and hoses, compatible with all types of rubber and plastic components of a cooling system;
- It has an excellent resistance to hard water and very low corrosion inhibitor depletion rates;
- The highly effective carboxylated additive package (OAT) ensures an exceptional stability of service qualities of the antifreeze throughout the entire service life;
- It does not contain silicates, nitrates, phosphates and amines (the NAP free technology);
- It has an extended service life in cooling systems: of passenger cars – up to 250 thousand km; of commercial vehicles – up to 500 thousand km; of stationary engines – up to 6 years.

It is recommended for engines requiring enhanced heat dissipation: highly accelerated engines, engines with a turbocharger and cooling systems of modern commercial vehicles.

Colour: red.

Service life: no less than 5 years.

Comply with the manufacturer's instructions provided in the user's manual!

Pour point, °C	Mix ratio, %	
20	35	65
-29	45	55

Recommendation

SAE J1034
 JASO M325
 AFNOR FRANCE NF R15-601 (except for RA)
 ASTM USA D3306
 ASTM USA D4656
 ASTM USA D4985
 ASTM USA D6210
 BSI GB BS 6580:2010
 FVV GERMANY Heft R443
 KSM SOUTH KOREA 2142
 MIL BELGIUM BT-PS-606-A
 MIL FRANCE DCSEA 615/C
 MIL ITALY E/L-1415b
 MIL SWEDEN FSD 8704
 NATO S-759
 OENORM AUSTRIA V5123
 UNE SPAIN 26-361-88/1
 ADE
 ASTON MARTIN
 VOLKSWAGEN TL 774 D
 VOLKSWAGEN TL 774 F
 BEHR
 BERGEN ENGINES 2.13.01
 BMW GS 94000
 BRB BR 637
 CASE NEW HOLLAND MAT 3624
 CATERPILLAR MAK A4.05.09.01
 CHEVROLET
 CLAAS
 CUMMINS CES 14439
 CUMMINS CES 14603
 CUMMINS IS series N14
 DACIA 41-01-001 / 41-01-001-T
 DAF 74002
 DETROIT DIESEL DFS 93K217
 FENDT
 FORD WSS-M97B44-D
 GREAT WALL
 HITACHI
 ISUZU
 JAGUAR CMR 8229
 JAGUAR STJLR.651.5003

JENBACHER TA 1000-0201
 JOHN DEERE JDM H5
 KAROSA
 KOBELCO
 KOMATSU 07.892 (2009)
 LAND ROVER STJLR.651.5003
 LEYLAND TRUCKS DW03245403
 LIEBHERR MD1-36-130
 MACK 014 GS 17009
 MAN 324 Typ SNF
 MAN B W A S
 MAN B W DIESEL AG D36 5600
 MAZDA MEZ MN 121 D
 MB 325.3
 MITSUBISHI MHI
 MTU MTL 5048
 MWM 0199-99-2091/11

PACKAGING

5L	MN4112-5	Plastic	
1000L	MN4112-IBC	Pallet tank	
208L	MN4112-DR	Drum	
60L	MN4112-60	Drum	
20L	MN4112-20	Plastic	
10L	MN4112-10	Plastic	
1L	MN4112-1	Plastic	20 pcs/box
350L	MN4112-350		