



## MANNOL Coolant G12+ 4212

A carboxylated (organic – OAT Organic Acid Technology) ready-for-use solution, designed for a year-round use in any modern cooling systems 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 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!

**Specifications**  
**Approval**  
**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  
FVW 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  
VOLKSWAGEN TL 774 D  
VOLKSWAGEN TL 774 F  
BERGEN ENGINES 2.13.01  
BMW GS 94000  
BRB BR 637  
CASE NEW HOLLAND MAT 3624  
CATERPILLAR MAK A4.05.09.01  
CUMMINS CES 14439  
CUMMINS CES 14603  
CUMMINS IS series N14  
DACIA 41-01-001 / 41-01-001-T  
DAF 74002  
DETROIT DIESEL 93K217  
FORD WSS-M97B44-D  
JAGUAR CMR 8229  
JAGUAR STJLR.651.5003  
JENBACHER TA 1000-0201  
JOHN DEERE JDM H5  
KOMATSU 07.892 (2009)  
LAND ROVER STJLR.651.5003  
LEYLAND TRUCKS DW03245403  
LIEBHERR MD1-36-130  
MACK 014 GS 17009  
MAN 324 SNF  
MAN B W DIESEL AG D36 5600  
MAZDA MEZ MN 121 D  
MB 325.3  
MINI GS 94000  
MITSUBISHI MHI  
MTU MTL 5048  
MWM 0199-99-2091/11

**PACKAGING**

5L	MN4212-5	Plastic	
20L	MN4212-20	Plastic	
1L	MN4212-1	Plastic	20 pcs/box