



## MANNOL Antifreeze AG13 (-40 °C) Hightec 4013

A hybrid (HOAT - Hybrid Organic Acid Technology) high-technology ready-to-use solution (which does not require dilution and protects the car cooling system at temperatures down to -40 °C) with excellent operating characteristics intended for a year-round use in any modern cooling system for which the use of mono-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;
- The non-organic additive package protects the surface at once and the organic part starts to act only when corrosion sources appear thus a maximum protection is reached from the start of use and the service life of the engine is extended;
- 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 parts of the cooling system;
- It has an excellent resistance to hard water and very low corrosion inhibitor depletion rates;
- The high-efficiency additive package ensures an exceptional stability of operating properties of the antifreeze throughout the entire service life;
- It is a liquid with an elevated level of borates and silicates. It does not contain nitrates, phosphates and amines (the NAP free technology).

Colour: green.

Service life: no less than 3 years.

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

## Specifications

### Approval

### Recommendation

SAE J1034  
AFNOR FRANCE NF R15-601  
ASTM USA D3306  
ASTM USA D4340  
ASTM USA D4985  
BSI GB BS 6580:2010  
NATO S-759  
BMW GS 94000  
CHRYSLER MS-7170  
FORD ESE-M978B4H-A  
FORD AF Plus  
GM 1825 M  
GM 1899 M  
GM SATURN  
JAGUAR  
JOHN DEERE  
MAN 324 Typ NF  
MB 325.0  
MINI GS 94000  
MTU MTL 5048  
OPEL GME L1301  
OPEL GM QL130100  
VAUXHALL GME L1301

## PACKAGING

5L	MN4013-5	Plastic	
1000L	MN4013-IBC	Pallet tank	
208L	MN4013-DR	Drum	
60L	MN4013-60	Drum	
20L	MN4013-20	Plastic	
10L	MN4013-10	Plastic	
1L	MN4013-1	Plastic	20 pcs/box