



## MANNOL Antifreeze AF13++ 4115

Environmentally friendly concentrated high-tech premium lobrid antifreeze (low hybrid) of the latest generation with excellent performance properties, designed for all-year-round use in all modern cooling systems for which the use of mono-ethylene glycol-based antifreeze is recommended. Provides reliable protection for all cooling systems.

### Properties:

- Protects metals and alloys (brass, copper, alloyed steel, cast iron, aluminium) excellently against all forms of corrosion and also prevents high-temperature corrosion on aluminium surfaces of modern engines. Already provides sufficient anticorrosive properties at a concentration of 30 %;
- The inorganic additive package protects the surface immediately, while the organic component only starts to work when corrosion spots form, thus achieving maximum protection from the beginning of application and extending engine life;
- Has outstanding thermal stability. Prevents limescale deposits;
- Has excellent thermal stability, thermal conductivity and resistance to foaming;
- Neutral to gaskets and hoses, compatible with all types of rubber and plastic parts of the cooling system;
- Has excellent resistance to hard water and very low corrosion inhibitor depletion rates;
- The high-performance additive package provides exceptional stability of the antifreeze properties over the entire service life;
- It is a low-silicate liquid. Does not contain nitrates, phosphates and amines (NAP free and OAT – Organic Acid Technology);
- Balanced package of additives maximises the life of the solution;
- Exceeds the requirements of international standards and most European vehicle manufacturers.

Recommended for passenger car engines and modern commercial vehicle engines.

Colour: red.

Service life: minimum 5years

Follow the manufacturer's instructions in the operating manual!

## Recommendation

SAE J1034  
AFNOR FRANCE NF R15-601 (except for RA)  
ASTM USA D3306  
ASTM USA D4656  
ASTM USA D4985  
BSI GB BS 6580:2010  
CUNA ITALY NC 956-16  
FVV GERMANY Heft R443  
NATO S-759  
UNE SPAIN 26-361-88/1  
VOLKSWAGEN TL 774 G  
VOLKSWAGEN TL 774 J  
CUMMINS CES 14603  
IRIZAR  
LIEBHERR Minimum LH-01-COL3A  
MAN 324 Si-OAT  
MB 325.5  
MB 325.6  
SCANIA  
SMART MB 326.0

## PACKAGING

5L	MN4115-5	Plastic	
1000L	MN4115-IBC	Pallet tank	
208L	MN4115-DR	Drum	
60L	MN4115-60	Drum	
20L	MN4115-20	Plastic	
	MN4115-1		