

## Product Sheet

### MUREX

***Concentrate antifreeze and coolant, for cars, vans, trucks, buses, agricultural and construction machinery***

#### Description

The cooling systems of modern internal combustion engines, liquid cooled, are more and more demanding on the quality of liquid cooling. These must not only ensure protection at low temperatures, but, at relatively low concentrations, have to ensure protection against corrosion, wear, deposit formation and foam. It is also important to prevent corrosion of pipes and hoses. Finally, the liquid must maintain full effectiveness throughout the period of use specified by the manufacturer, and must be miscible and compatible with antifreeze from other suppliers.

MUREX is a long-life antifreeze, free from phosphates, nitrites and amines. Suitable for radiators of cars, vans, trucks, buses, agricultural and construction machinery.

#### Specifications

- ASTM D 3306-05
- ASTM D 4985
- AFNOR NF R 15-601
- BS 6580:1992
- DEUTZ
- JENBACHER TA 1000-0201
- MAN 324 NF
- MB – APPROVAL 325.0
- MTU MTL 5048

#### Benefits

- Compatible with all the materials used for seals and gaskets.
- Maintain the performance and effectiveness of additives for the entire period of operation.
- Optimum operation even on engines made of aluminum alloy.
- Free from nitrites, phosphates and amines (as required by some manufacturers for use on aluminum alloy engines).

#### Applications

- MUREX is suitable for use in "open" or "closed" cooling systems.
- Dilute MUREX in distilled water. Do not use tap water, rain water, or well water to avoid pollution problems.
- Excellent corrosion protection at concentrations of 15% by volume.
- Add the quantity of MUREX according to the degree of protection required, and the amount of water needed, then let the engine run for about 10 minutes with open cooling circuit. This will ensure the correct and complete mixing.
- MUREX should be used mixed at 35% in water throughout the year, as a guarantee of protection against corrosion, sludge formation, etc.. The use of pure water in summer can create rust and deposits, and can inhibit a correct heat exchange. The continuous use of MUREX ensures perfect functioning of all parts of the system (thermostat, valves). In addition, the increase of the boiling point of the mixture, allows to drive safely even in critical conditions.
- The level of protection of MUREX can be tested with any instrument suitable for the purpose.

- It is recommended to avoid too high concentrations because the cooling properties worsen at concentrations higher than 70%. The ideal concentration is always around 50%, because the freezing point of the 50:50 mixture in water is about -40° C, but only about -20° C for the pure antifreeze.
- Pollution of 0.1% of antifreeze in the engine oil can cause problems due to poor lubrication created by the engine oil thickening. To avoid these problems it is suggested to use dedicated instruments for filling the cooling system. If, up front the use of these expedients, however, occurs a thickening of the engine oil, the cause must be searched in a poor sealing quality. In case of pollution of antifreeze in the engine oil, the simple replacement of the engine oil may not be sufficient. To completely remove the antifreeze from the engine oil circuit it is usually required the flushing with new engine oil for about 30 minutes; after this period the engine oil must be completely replaced.
- The pure antifreeze should not be stored outdoors at low temperatures in winter because it can occur a fungal contamination, even if this has no effect on the performance of the fluid.

Vol. % MUREX	Corrosion protection @:
15%	-7°C
20%	-10°C
25%	-14°C
30%	-18°C
35%	-23°C
40%	-28°C
45%	-33°C
50%	-38°C

## Average Typical Data

Properties	Unit	Value	Test Method
Base fluid		Mono ethylene glycol	DIN 51 511
Color		Blue	
Density @ 20°C	g/ml	1.22	ASTM D 1298
Boiling Point	°C	165	ASTM D 1120
Flash Point COC	°C	120	ASTM D 92
Alkaline Reserve	ml HCl 0.1N	14	ASTM D 1121
pH @ 50%		7.2	ASTM D 1287
Water content	% weight	< 2.5	ASTM D 1123

The information contained in this product sheet are the best of our knowledge and nothing contained therein shall be assumed as a guarantee. It is responsibility of the user to determine the suitability and correct relevance of these information according to its specific use.