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## Multi-purpose Antifreeze

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### 1. Description

Multi-purpose antifreeze is an economical aqueous concentrate that can be used to formulate coolants that provide frost and corrosion protection.

Exempt from potentially harmful additives such as nitrites, amines and phosphates, the coolant also contributes to a safer environment. The coolant is also free of silicates and borates.

Unlike higher performance coolants, it is recommended to change the coolant every year.

### 2. Benefits

For the perfect operation of water-cooled internal combustion engines, the engine and cooling system have to be adequately protected from corrosion and frost damage. To that purpose antifreeze coolant is added to the cooling water.

Coolants formulated from **Multi-purpose Antifreeze** offer the following benefits to the user:

- Corrosion protection**
- Frost protection**
- Boiling protection**
- Miscibility**
- Seal compatibility**
- Hard water stability**
- Low cost**

### 3. Storage requirements & Product handling

The product should be stored above -5°C and preferably at ambient temperatures. Periods of exposure to temperatures above 35°C should be minimized. As with any antifreeze coolant, the use of galvanized steel is not recommended for pipes or any other part of the storage/mixing installation.

The product can be stored for 2 years in unopened containers without any effect on the product quality or performance. It is strongly advised not to expose the coolant in translucent packages to direct sunlight because this can degrade the colour dyes present in the coolant, and result in fading of colour or discolouration over time. This reaction can be accelerated if coupled with high ambient temperatures. It is therefore advisable to store coolant filled in translucent packages indoors to avoid this issue.

At higher temperatures and in open containers considerable amounts of water can evaporate and this may result in solidification of the product, without negative effect on the product.

### Technical Information

<b>Chemical and Physical properties</b>		Multi-purpose Antifreeze		Method
	nitrite, amine, phosphate, borate, silicate	nil		
	density, 20°C (kg/l) (Base)	1.050 -1.080		ASTM D5932
		Multi-purpose Antifreeze	Limit	Method
	pH (33 vol %)	8.5 typ.		
	reserve alkalinity (pH 5.5)	3.2 typ.		
	boiling point	177°C typ.	≥ 150°C	BS 5117:1.2
	freezing point	-36°C typ.	≤ -33°C at 50 vol%	BS 5117:1.3
	hard water stability	clear solution no deposits	≤ 0.5ml	BS 5117:1.5