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# BS Coolant

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## 1 Description

**BS Coolant** is an economical coolant concentrate providing frost and corrosion protection. The coolant is recommended when price considerations take priority over quality. Exempt from potentially harmful additives such as nitrites, amines and phosphates, the coolant also contributes to a safer environment.

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 a coolant is added to the cooling water.

**BS Coolant** offers the following benefits to the user :

- **corrosion protection, also for non ferrous metals**
- **frost protection**
- **boiling protection**
- **miscibility**
- **seal compatibility**
- **hard water stability**
- **low cost**

## 2 Application

**BS Coolant** provides year-round frost and corrosion protection. It is recommended to use at least 33 vol. % of **BS Coolant** in the coolant solution. This provides frost

protection to -18°C. Concentrations higher than 70 vol. % are not recommended; maximum frost protection (about -69°C) is obtained at a concentration of 68 vol. %.

## 3 Standards

**BS Coolant** is conformable to British Standard BS6580:1992 and BS 6580:2010\*

*\* For product containing 25% or more 1,2 ethane diol (MEG) which is supplied as packaged goods intended for retail to the general public, BS 6580:2010 requires the addition of minimum 25 ppm of denatonium benzoate (bitterant), or the package has to be fitted with a childproof closure.*

## 4 Availability

Please contact your local area sales manager on availability of packages, dilutions, and colours.

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### 5 Storage requirements

The product should be stored above -20°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.

Further, 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 the colour or discoloration 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.

### 6 Toxicity & safety

For toxicity and safety data we refer to the material safety data sheet. The transport is not regulated. Labeling as for any MEG based coolant is required: X<sub>n</sub>; R 22 (Harmful

if swallowed) and S 2 (Keep out of reach of children).

This product should not be used to protect the inside of drinking water systems against freezing.

*All information contained in this Product Information Leaflet is accurate to the best of our knowledge and belief as at the date of issue specified. However, the Company makes no warranty or representation, express or implied, as to the accuracy or completeness of such information.*

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### Addendum - Technical information

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#### Chemical and physical properties

	<b>BS Coolant</b>	specification limits	method
appearance	clear liquid	clear Liquid	visual
colour	optional	optional	visual
density 20°C, kg/l	1.131 typ	-	ASTM D1122
refractive Index, 20°C	1.435 typ	-	ASTM D1218
ash content, % w/w	0.4 typ	-	ASTM D1119
equilibrium boiling point, °C	155 typ	> 150	ASTM D1120
pH (33 vol %)	8.3 typ	-	ASTM D1287
pH (50 vol %)	8.4 typ	-	ASTM D1287
freezing point, °C (50 vol %)	-35 typ	-	ASTM D1177
reserve alkalinity (pH 5.5)	3.0 typ	-	ASTM D1121
foaming properties at 88°C			
■ foam, ml	25 typ	50	ASTM D1881
■ break time, sec	1.5 typ	5	
hard water stability, ml	<0.05 typ	< 0.5	BS 5117:1.5

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### BS 5117: 2.2 hot immersion glassware corrosion test

ASTM D1384 is almost identical to BS 5117:2.2

	weight loss in mg/coupon <sup>1</sup>					
	Brass	Copper	Solder	Steel	Cast iron	Aluminium
ASTM D3306 (max)	10	10	30	10	10	30
BS 6580 : 1992 (max)	10	10	15	10	10	15
<b>BS Coolant</b> (typ)	0.2	0.3	1.2	0.3	0.3	5.0

<sup>1</sup> weight loss AFTER chemical cleaning acc. to ASTM procedure. Weight gain is indicated by a - sign.

Corrosion protection

### ASTM D4340 aluminium heat transfer test

	weight loss in mg/cm <sup>2</sup> /week
ASTM D3306 (max)	1.0
BS 6580 (max)	1.0
<b>BS Coolant</b> (typ)	-0.2