



## TECHNICAL DATA SHEET

### GEM ANTIFREEZE 5 YEAR

MEG concentrated engine coolant.

Product code: AFLLP5

#### Product Description:

Gem Antifreeze 5 year is a coolant concentrate based on monoethylene glycol, containing no nitrates, amines, phosphates, borax or silicates and is suitable for all year round use in both petrol and diesel engines.

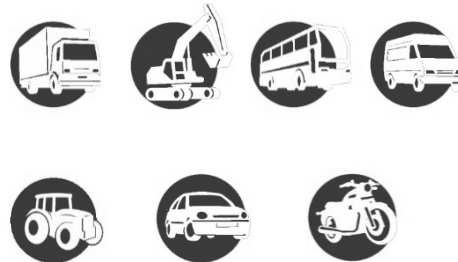
#### Application:

Gem Antifreeze 5 year is formulated to be truly universal in its application. It provides a high degree of corrosion protection for all engine cooling systems whether of aluminium or ferrous construction for up to 5 years or 240,000 kms.

A 50% concentration is recommended for maximum freezing and corrosion protection to minus 38°C

#### Advantages/Benefits:

- **5 year or 240,000 kms protection**
- OAT long life corrosion protection
- Protects against overheating
- Protects against freezing
- Suitable as a summer coolant when diluted with water
- All year round usage
- Multi metal compatibility
- Hard water scale prevention



#### Main Specifications:

BS	6580/92
ASTM	D3306/D4656
AFNOR	NF R15-601
SAE	J 1034
Colour	Pink
Coefficient of Expansion	0.00062 (20°C)
Flash point	124°C
Refractive Index n20/D	1.43
Boiling point	187°C
Vapour pressure at 20°C	0.08 mbar
Density at 20°C kg/m <sup>3</sup>	1.117
pH 50% aqueous solution	8.9
Kinematic Viscosity at 20°C	23 mm <sup>2</sup> /s

#### Health & Safety: (Group 1)

Please refer to the relevant MSDS which is available to all customers.

#### Availability:

Available in bulk & 1000 litre IBCs  
200 & litre barrels  
20 litres  
4x5 litres  
15x1 litres



Gem Oils use a QMS system which is ISO 9001:2015 approved

Rev 001 Date 01.01.2020

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## OEM Requirements

- Ford WSS-M97B44-D
- Mercedes-Benz 325.3
- Renault 41-01-001
- General Motors GM 6277M
- Volkswagen VAG TL774D/ F
- MAN 324SNF

## Degree of Freezing Protection

Concentration % volume in water	Freezing Protection
25	-12°C
33	-20°C
50	-38°C

The illustrated figures above indicate the temperature at which ice crystals will form.

Please note that concentrations above 50% will cause mixed antifreeze to freeze at a lower temperature.

## Corrosion Test Results

Gem Antifreeze 5 year provides extra protection of the alloys used in the cooling system of modern vehicles.

The table below compares corrosion in mg/specimen, in a water/monoethylene glycol solution and in a water/LLP5 solution as described in ASTM D1384.

The weight loss results demonstrate the effective corrosion inhibition provided by LLP5 Antifreeze.

	H <sub>2</sub> O	MEG 33% in H <sub>2</sub> O	LLP5 33% in H <sub>2</sub> O	ASTM D3306 Limit (mg)
Copper	49	6.5	0	10 max
Solder	137	345	-5	30 max
Brass	13	8	1	10 max
Steel	700	1474	1	10 max
Cast Iron	775	2472	1	10 max
Aluminium	121	30	1	30 max

## Storage

**Containers should be stored indoors as Freezing point of neat products is -12°C**



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