



# Havoline<sup>®</sup> GHC Pre-Mixed 50/50

## Proven performance engine coolant

### Product description

Havoline GHC Pre-Mixed 50/50 is a proven performance ethylene glycol engine coolant premix, designed for use in a wide range of automotive and industrial engine cooling systems.

Havoline GHC Pre-Mixed 50/50 is formulated with a hybrid corrosion inhibitor package containing carboxylates and silicates. It is free from potentially harmful additives including nitrites, amines and phosphates, contributing to a safer environment.

### Customer benefits

- Silicate and carboxylate inhibitor technologies offer proven performance corrosion protection
- Ethylene glycol base design offers low maintenance engine boiling and freezing protection
- Nitrite, amine and phosphate-free formulation contributes to a safer environment
- Designed for use in a wide range of automotive and industrial engines

### Applications

- Havoline GHC Pre-Mixed 50/50 is used as a cooling and heat transferring fluid in internal combustion engines. The heat of the combustion is transferred via the fluid to the radiator where the mixture is cooled by means of air flow
- Formulated with powerful and efficient additives, Havoline GHC Pre-Mixed 50/50 is recommended for use in cooling systems of many types of liquid cooled automotive and industrial internal combustion engines. Free from potentially harmful additives such as nitrites, amines and phosphates, Havoline GHC Pre-Mixed 50/50 also contributes to a safer environment
- This product is not to be used to protect the inside of potable water systems against freezing

### Product highlights

- **Offers corrosion protection**
- **Promotes boiling and freezing protection**
- **Contributes to a safer environment**
- **Wide range of automotive and industrial engine applications**

#### Selected specification standards include:

AFNOR	ASTM
Bezirksregierung Arnsberg, Abteilung Bergbau und Energie	BMW
Daimler	Deutz
Jenbacher	Liebherr
MAN	MTU
Opel	Porsche
Saab	SAE
VW/Audi/Seat/Skoda	

## Approvals, performance and recommendations

### Performance

The concentrate meets the requirements of:

- ASTM D3306
- ASTM D4985
- SAE J1034
- AFNOR NF R 15-601

### Recommendations

The concentrate is suitable for use in following engines:

- BMW BMW N 600 69.0
- Bezirksregierung Arnsberg, Abteilung Bergbau und Energie 84.12.22.63-2001-2
- Daimler DBL 7700.20, page 325.0
- Deutz H-LV 0161 0188
- Jenbacher TA 1000-0201
- Liebherr TLV 035, TLV 23009 A
- MAN 324 Typ NF
- MTU MTL 5048
- Opel B 040 0240
- Porsche Vehicles built until 1995
- Saab 690 1599
- VW/Audi/Seat/Skoda TL 774-C

It is recommended not to dilute this product with other coolant formulations by more than 25% in order to maintain performance claims.

## Product maintenance and handling

- Havoline GHC Pre-Mixed 50/50 is compatible with many other coolants based on ethylene glycol. It should not be mixed with silicate-free OAT engine coolants as exclusive use of Havoline GHC Pre-Mixed 50/50 is recommended for optimal corrosion protection and sludge control
- Havoline GHC Pre-Mixed 50/50 should be stored above -20°C and preferably at ambient temperatures
- Periods of exposure to temperatures above +35°C should be minimised
- It is strongly advised not to expose Havoline GHC Pre-Mixed 50/50 in translucent packages to direct sunlight because this can result in discoloration over time. It is therefore advised to store coolant in translucent packages indoors
- It is strongly recommended to use new containers and not recycled items
- Havoline GHC Pre-Mixed 50/50 should be used as purchased. No dilution is recommended
- As with any antifreeze coolant, the use of galvanized steel is not recommended for pipes or any other part of the storage/mixing installation
- Havoline GHC Pre-Mixed 50/50 has a storage shelf life of up to 3 years, provided the container remains unopened and sealed air-tight

Always dispose of used coolant in accordance with all local, state and federal guidelines.

Typical test data			
Test	Test Methods	Results	
Dilution		50/50	Concentrate
<b>Shelf Life: 36 months from date of filling indicated on the product label.</b>			
Density at 20°C, Kg/L	ASTM D5931	1.068	NA
Freezing point, °C	ASTM D1177	-36	NA
Boiling point, °C	ASTM D1120	107	NA
pH at 20°C, NUOM	ASTM D1287	8.0	NA
Reserve alkalinity, mL 0.1N HCl	ASTM D1121	7.6	NA
<b>ASTM D1384 Glassware Corrosion Test <sup>(1)</sup></b>			
Copper, Weight loss, mg/coupon <sup>(2)</sup>	ASTM D1384	NA	1 (10) <sup>(3)</sup>
Solder, Weight loss, mg/coupon <sup>(2)</sup>	ASTM D1384	NA	0 (30) <sup>(3)</sup>
Brass, Weight loss, mg/coupon <sup>(2)</sup>	ASTM D1384	NA	0 (10) <sup>(3)</sup>
Steel, Weight loss, mg/coupon <sup>(2)</sup>	ASTM D1384	NA	1 (10) <sup>(3)</sup>
Cast iron, Weight loss, mg/coupon <sup>(2)</sup>	ASTM D1384	NA	1 (10) <sup>(3)</sup>
Aluminium, Weight loss, mg/coupon <sup>(2)</sup>	ASTM D1384	NA	0 (30) <sup>(3)</sup>
<b>ASTM D4340 Aluminium Heat Rejection Test <sup>(4)</sup></b>			
Aluminium, Weight loss, mg/cm <sup>2</sup> /week <sup>(2)</sup>	ASTM D4340	NA	0.3 (1.0) <sup>(3)</sup>

(1) Data generated on a 33vol% dilution as per the method

(2) Negative sign indicates a weight gain

(3) Values in between "( )" are ASTM D3306 max limits

(4) Data generated on a 25vol% dilution as per the method

The information given in the typical data does not constitute a specification but is an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved. This supersedes all previous editions and information contained in them.

**Disclaimer** Chevron accepts no liability for any loss or damage suffered as a result of using this product for any application other than applications specifically stated in any Product Data Sheet's.

**Health, safety, storage and environmental** Based on current available information, this product is not expected to produce adverse effects on health when used for the intended application and in accordance with the recommendations provided in the Material Safety Data Sheet (MSDS). MSDS's are available upon request through your local sales office, or via the Internet. This product should not be used for purposes other than its intended use. When disposing of used product, take care to protect the environment and follow local legislation.

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