

# Havoline Extended Life Antifreeze Base

## 1 Description

**Havoline Extended Life Antifreeze Base (Havoline XLB)** is a concentrated engine coolant additive package in ethylene glycol, designed to prepare premium quality engine coolants - **Havoline Extended Life Antifreeze Coolant (Havoline XLC)** - by the simple addition of ethylene glycol.

Based on patented *silicate-free* aliphatic additives technology, a coolant is obtained that meets the requirements of many important Original Equipment Manufacturers. This coolant - **Havoline XLC** - provides long-life corrosion protection for all engine metals, including aluminium and ferrous alloys, and is recommended for use in cooling systems of all types of liquid cooled automotive and

industrial combustion engines. The corrosion inhibitors contained in **Havoline XLB** have very low depletion rates, unlike traditional silicate based technologies. During extensive fleet testing, the synergistic combination of mono- and di-carboxylates present in this coolant, have proven to provide protection for at least **650,000 km** (ca. 8,000 hours) in truck & bus-application or **250,000 km** (ca. 2,000 hours) for passenger cars or **32,000 hours** (or 6 years) for stationary engines.

Exempt from potentially harmful additives such as nitrites, amines and phosphates, the coolant will contribute to a safer environment.

## 2 Blending Engine Coolant from Havoline XLB

**Havoline XLC** can be blended from **Havoline XLB** by simply mixing the following ingredients at ambient temperatures:

<u>Ingredient (weight %)</u>	<b>Havoline XLC</b>
Ethylene glycol	75.00
<b>Havoline XLB</b>	25.00
Colouring agent	optional

## 3 Availability

**Havoline XLB** is available in bulk and various packages in different colours and with or without bittering agent. Please contact your local Artec Area Sales

Manager on availability of packages, dilutions and colours. In the range of organic additives technology Artec can offer:

- **Havoline Extended Life Antifreeze Coolant (Havoline XLC)** is the MEG-based coolant concentrate. **Havoline XLC** is obtained by mixing 25 % wt of **Havoline Extended Life Antifreeze Base** with 75 % MEG.



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- **Havoline Extended Life Corrosion Inhibitor (Havoline XLI)** is an aqueous superconcentrate of the same inhibitor package.
- **Havoline Extended Life Antifreeze Coolant – PG (Havoline XLC-PG)** is the MPG-based coolant concentrate.

Separate information bulletins with more details are available for all these different products.

## 4 Storage requirements

The product should be stored above -30°C and preferably at ambient temperatures. Periods of exposure to temperatures above 35°C should be minimized.

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.

**Havoline Extended Life Antifreeze Base** can be stored for minimum 1 year in unopened containers without any effect on the product quality or performance.

It is strongly recommended to use new containers and not recycled ones. As with any antifreeze coolant, the use of galvanized steel is not recommended for pipes or any other part of the storage/mixing installation.

## 5 Toxicity & safety

For Toxicity and Safety we refer to the Material Safety Data Sheet. The transport is not regulated. The following labeling is required: Xn: R 22 (harmful if swallowed), R 63 (possible risk of harm to the unborn child), and S 2 (keep out of reach of

children), S36/37 (wear suitable protective clothing and gloves).

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

### Chemical and physical properties

	Havoline XLB	method
Ethylene glycol	72 % w/w glycol	
Other glycols	0.4 % max.	
Total water content (including crystal water)	15 % w/w max	ASTM D1123
Ash content	3.1 % w/w typ.	ASTM D1119
Nitrite, amine, phosphate, borate, silicate	nil	
Colour	uncoloured	
Specific gravity, 20°C	1.110 typ.	ASTM D1122
Flash Point, open cup	144°C typ.	ASTM D92
Storage stability	1 year	
pH in water, 33% vol. <sup>(1)</sup>	8.4 typ.	ASTM D1287
Reserve alkalinity (pH 5.5) <sup>(1)</sup>	6 typ.	ASTM D1121

(1) 25.0 g **Havoline XLB** + 75.0 g monoethylene glycol

