

**HD5X**  
LONG LIFE COOLANT

 Haltermann  
Carless





**Haltermann Carless offers an extensive range of automotive coolants, brake fluids and screen washes. These products are formulated to meet the exacting needs of modern high performance vehicles.**

Haltermann Carless is part of the 'H•C•S Group' of companies specializing in high-value hydrocarbons and specialities, and tailored hydrocarbon solvents and blends.

Haltermann Carless is a key crude and gas condensate off-take partner for North Sea producers. We make a range of high performing oil products from drilling muds to racing fuels.

Haltermann Carless is at the centre of the global chemicals business. The world's largest speciality chemical companies rely on us to supply business critical products. Haltermann Carless is also a major producer of coolants and other automotive fluids.

Haltermann Carless has achieved its high performance and growth by being a reliable and responsive long-term business partner. We are always ready to explore new business opportunities, supported by our state-of-the-art laboratories and technical teams.

Haltermann Carless buys oil and chemical feed-stocks, refines, blends, and sells them worldwide. We use our own unique business model focusing on developing sustainable niches.

**Sustainability of the business**

Haltermann Carless operates in specialist markets. As larger companies streamline, the fields of business open to Haltermann Carless widen.

Haltermann Carless has grown healthily in recent years, despite the general economic climate, and maintain a sound financial position with attractive growth prospects. Haltermann Carless sales have grown towards £400m p.a, based on volumes of approximately 650m litres.

**Dedicated Automotive Production & Distribution Services**

Haltermann Carless is uniquely placed in the market in that it has the advantage of two dedicated blending and storage centres for the production and distribution of automotive products.

From these strategically located centres, Haltermann Carless has the ability to competitively cover the major consumption markets in North West Europe.

Haltermann Carless facilities are located in Scunthorpe, UK and Antwerp, Belgium. Both facilities perform blending, storage, filling and distribution services. With the support of a number of longstanding freight and distribution partners our comprehensive range of automotive products can be supplied directly to Customers warehouses in both bulk and packed form - including the provision of IBC's, flexibags, drums and 20L cans.

Quality control is centrally managed for both sites via an in-house Technical Services Team with its own dedicated laboratory located in Scunthorpe, UK.



**Modern engine coolants are more than just antifreeze. They are year round engine coolants that provide not only frost protection, but also protect the range of metals found in modern automotive cooling systems against corrosion.**

Coolants must also have good compatibility with elastomers and have low foaming and low scaling characteristics to ensure optimum heat transfer performance.

Modern coolants must be suitable for use in all cooling systems whether they are constructed predominantly from traditional ferrous metals or the more modern aluminium alloys and polymeric composites.

In certain applications the use of specific corrosion inhibitors is not permissible or desirable for technical or environmental reasons. Specialised formulations are required to meet these criteria and maintain high performance levels.

**Technical**

HD5X is an ethylene glycol based engine coolant concentrate formulated for optimum performance in heavy duty diesel engine applications but equally suitable for light duty use. It employs established inhibitor technology and is nitrite, amine and phosphate (NAP) free. BTC Classification Type 3E.

**Benefits**

Equivalent to a G11 (VAG TL 774C). HD5X is hybrid NAP free coolant for light and heavy duty use.

**Application**

The inhibitors in HD5X include organic acids in combination with borate and silicate to provide excellent corrosion protection in all applications.

HD5X uses a superior silicate stabilisation technology to eliminate the potential for formation of silicate gel often observed with inferior products whilst other additives ensure good compatibility with hard water and prevent the formation of scale that can result from use of hard water.

HD5X50 is a premix engine coolant, offering all of same benefits of the concentrate formula, but as a ready to use solution.

**Compatibility**

BASF Glysantin G48, Ineos C2270-1, Artec Freecor NBI

**Minimum Standards**

HD5X exceeds the requirements of most European and International Standards including: ASTM D3306, ASTM D 4985, ASTM D 6210, SAE J 1034, BS 6580 (1992), AFNOR NF R15-601, JIS K2234.



## Physical Properties

Parameter	Method	HD5X	ASTM D3306
<b>Appearance</b>	<b>Visual</b>	<b>Clear liquid*</b>	<b>Not specified</b>
Density @ 20°C mg/cm <sup>3</sup>	ASTM D 4052	1.123	1.110 - 1.145
Equilibrium Reflux Boiling Point °C	ASTM D 1120	170	163 min
Freezing Point °C (50% Dilution by vol.)	ASTM D 1177	-40	-37 max
Freezing Point °C (33% Dilution by vol.)	ASTM D 1177	-20	
pH (50% vol.)	ASTM D 1287	8.0	7.5 - 11.0
Reserve Alkalinity 0.1N HCl	ASTM D 1121	15	Report
Water Content	ASTM D 1123	3	5 max
Foaming Properties	Vol. (ml)	ASTM D1881	150 max
	Break (s)		5 max

*\*Product can be supplied colourless or dyed in accordance with customer requirements.*



## Corrosion Protection

### ASTM D1384 Glassware Corrosion Test Results

	Weight Loss mg/Coupon					
	Copper	Solder	Brass	Steel	Cast Iron	Aluminium
ASTM D3306 (max)	10	30	10	10	10	30
HD5X	0.9	2.0	1.0	0.9	0.2	-2.8

### ASTM D 4340 Corrosion of Aluminium under heat rejecting conditions

	Weight Loss mg/cm <sup>2</sup> /week
ASTM D3306 (max)	1.0
HD5X	0.2

### ASTM D2570 Simulated Service Corrosion Test

	Weight Loss mg/Coupon					
	Copper	Solder	Brass	Steel	Cast Iron	Aluminium
ASTM D3306 (max)	20	60	20	20	20	60
HD5X	2.0	5.1	3.0	2.2	0.5	-2


**ASTM D2809 Cavitation Corrosion Characteristics of Aluminium Pumps**

	Visual Rating
ASTM D 2809 (min)	8
HD5X	9

*All of the above figures are typical values and do not constitute a specification.*

**Freeze Protection**

	Concentration by Volume %				
	25	33	40	50	60
Specific Gravity 20/4°C	1.030	1.045	1.060	1.074	1.087
Freeze Protection* °C	-12	-22	-27	-40	-56

\*Average of Freezing Point and Pour Point

## COOLANTS

**GP3 (UK) & AF1 (EU)**



**AF2 with Glycerine (EU)**



**EXLC5 Extended Life**



**SiXLC6**



**MXLC5/50 Premix**



**HD4X & HD4X50 Premix**



**HD5X & HD5X50 Premix**



**Radiator Protector**



**MPG Coolant 101**



**AL39**



**GXLC5**



## BRAKE FLUID

**Brake Fluid DOT3 (210/230)**



**Brake Fluid DOT4**



**Brake Fluid DOT4 LV (Low Viscosity)**



**Brake Fluid DOT5.1**



## SCREEN WASH

**Petroscreen SC16**



For more information please visit:  
[www.haltermann-carless.com](http://www.haltermann-carless.com)

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Our products are suitable for a large range of vehicles, from passenger to heavy goods vehicles. We have highlighted each product with this simple guide:

**Passenger Vehicles**



**Light Commercial Vehicles**



**Heavy Duty Vehicles**



**Heavy Goods Vehicles**

