

SIXLC6
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**

SiXLC6 is an ethylene glycol based engine coolant concentrate, which uses Organic Acid Inhibitor Technology in combination with silicate and is free from nitrites, amines, phosphates, borates.

Benefits

Equivalent to a G12++ (VAG TL 774 G) but also an alternative for the G13 (G12++ with Glycerin)

SiXLC6 has a lower density and therefore you can get about 20L to 25L more from 1MT.

SiXLC6 can be mixed with G13 and G12++ and can be used in cars which require G13.

Application

Fleet trials have shown that when used at the correct concentration coolants based on Organic Acid Inhibitor Technology continue to provide effective corrosion protection for up to 250,000 km for passenger cars and 500,000km in commercial vehicles.

It is recommended that the coolant is replaced when the above mileages have been reached or after 5 years which ever is the sooner. Unlike traditional coolants which employ inorganic inhibitors, SiXLC6 has excellent hard water stability and very low inhibitor depletion rates.

Compatibility

SiXLC6 is compatible with other ethylene glycol based coolants and can be safely mixed with them.

As SiXLC6 employs an inhibitor technology that is significantly different from that used in traditional coolants we recommend that prior to using SiXLC6 in systems previously filled with traditional coolant that the cooling system is drained and flushed with clean water before filling with SiXLC6 diluted in accordance with the vehicle manufacturers instructions to ensure optimum performance and durability.

Failure to do so can significantly reduce the working life of the SiXLC6. In the absence of a vehicle manufacturer's advice we would recommend a 50% dilution of SiXLC6 in good quality water.

Minimum Standards

SiXLC6 exceeds the requirements of most European and International Standards including: ASTM D3306, ASTM D 4985, SAE J 1034, BS 6580 (2010), AFNOR NF R15-601*, CUNA NC 956-16, UNE 26361 - 88, JIS K 2234 *, NATO S 759.

*(*with the exception of reserve alkalinity)*

It also meets the performance requirements of the following OEM specifications: VAG TL 774 G



Physical Properties

Parameter		Method	SiXLC6	ASTM D3306
Appearance		Visual	Clear red – orange liquid free from suspended matter	Not specified
Specific Gravity 15/15°C		ASTM D 4052	1.125	1.110 - 1.145
Equilibrium Reflux Boiling Point °C		ASTM D 1120	167	163 min
Freezing Point °C (50% Dilution by vol.)		ASTM D 1177	-38	-37 max
Freezing Point °C (33% Dilution by vol.)		ASTM D 1177	-19	
pH (50% vol.)		ASTM D 1287	8.4	7.5 - 11.0
Reserve Alkalinity 0.1N HCl		ASTM D 1121	9.0	Report
Water Content		ASTM D 1123	4	5 max
Foaming Properties	Vol. (ml)	ASTM D1881	40	150 max
	Break (s)		1	5 max

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
SiXLC6	1.7	-0.5	1.7	1.0	-0.6	-4.0

ASTM D 4340 Corrosion of Aluminium under heat rejecting conditions

	Weight Loss mg/ cm ² /week
ASTM D3306 (max)	1.0
SiXLC6	0.1

(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

Haltermann Carless UK Limited
Cedar Court, Guildford Road, Leatherhead, Surrey KT22 9RX
Tel: +44 (0)1372 360 000, Fax: +44 (0)1372 380 400

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

