

# CAFLON HDC100

Ethylene Glycol based Antifreeze  
Designed for Light & Heavy duty Vehicles



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## CAFLON HDC100

- Is an ethylene glycol based coolant concentrate formulated for use in all engines (car, truck and bus), including those constructed from aluminium alloys.
- Provides all year-round frost and corrosion protection. It is recommended to dilute the material 50 vol. % in the final coolant solution. This provides frost protection to -38°C.
- Contains a hybrid corrosion inhibitor package based on nitrite, silicate and organic acids.
- Supplied **green**, however can be supplied **blue** or colourless and contains a bittering agent.

### Performance, Features & Benefits:

- Developed to protect car, bus and truck engines of both ferrous and aluminium construction against corrosion as well as damage from frost.
- Adopts low silicate technology that boosts overall corrosion protection (in particular against aluminium).
- Also contains silicate stabilisers to prevent the formation of silicate gel often observed with inferior formulations / products.
- The exceptional thermal stability eliminates the risks of deposits particularly near the cylinder head, engine block, radiator, water pump and heat exchanger.
- Is Amine and Phosphate free.
- Exceeds the requirements of most European and International Standards;
  - BS 6580 (2010), ASTM D3306, ASTM D6210, TMC RP-329, SAE J1034



### DILUTION

CAFLON HDC100 must be diluted with water before use (ideally with DI water). It is hard water compatible and can be mixed with tap water (\*) before filling into the cooling system.

(\*) water quality should not exceed the following limits;

- Water Hardness 0 - 20° dH (0 - 3.6mmol/l)
- Chloride content 100 ppm max
- Sulphate content 100 ppm max
- CAFLON HDC100 can also be supplied pre-diluted.

### Typical Properties (Not a Specification)

Test Number & Description	Test Result
D-5931 <sup>1</sup> Relative Density (aka Specific Gravity)	1.1325
D-1177 <sup>1</sup> Freeze Point °C (°F) 50% with 50% DI Water v/v	-38.3
D-1120 <sup>1</sup> Boiling Point °C (°F) As received	175.5°C (347.9°F)
D-1120 <sup>1</sup> Boiling Point °C (°F) 50% with 50% DI Water v/v	108.0°C (226.4°F)
D-1882 <sup>1</sup> Auto Finish Effect	No Effect
D-1119 <sup>1</sup> Ash Content, mass %	1.5
D-1287 <sup>1</sup> pH: 50% vol. in distilled water	8.09
D-3624 <sup>1</sup> Chloride ug/g	6
D-1123 <sup>1</sup> Water mass percent	2.5
D-1121 <sup>1</sup> Reserve Alkalinity ml	14.3
D-1881 <sup>1</sup> Foaming Tendencies	20 ml volume 0.6 seconds break time

CAFLON HDC100 can be supplied in a variety of colours, as well as a 50% v/v dilution CAFLON HDC50; subject to minimum order quantity.

## CORROSION PROTECTION

### Glassware Corrosion Test - ASTM D 1384

Glassware Corrosion test - ASTM D 1384					
ASTM D 1384	Specimen Corrosion Weight Loss (mg)				
Specimen	#1	#2	#3	Avg	Max**
Copper	1	2	1	1	10
Solder	6	4	3	4	30
Brass	1	1	1	1	10
Steel	0	1	0	0	10
Cast Iron	1	0	1	1	10
Cast Aluminium	0	0	0	0	30

\*\* Maximum corrosion weight loss as specified by ASTM D3306

### Corrosion of Aluminium under Heat Rejecting Conditions - ASTM D 4340

ASTM D 4340 <sup>1</sup> Test Results	Run #1	Run #2	Average
Weight Loss (mg/cm <sup>2</sup> /wk)	0.01	0.02	0.02
pH After	8.12	8.12	8.12

Notes: ASTM places the maximum corrosion rate at 1.00 (mg/cm<sup>2</sup>/wk).

### Cavitation Corrosion and Erosion-Corrosion Characteristics of Aluminium Pumps with Engine Coolants - ASTM D 2809

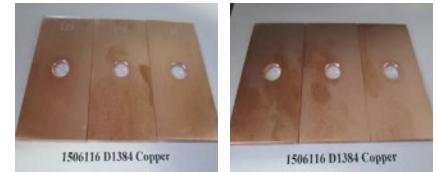
ASTM D 2809 <sup>1</sup> Test Results	
Pump Rating <sup>A, B</sup>	pH
9	Start: 8.45 End: 8.07

Comments: Minimal corrosion or erosion. Some rounding of sharp corners or light smoothing or both, or polishing of working surfaces.

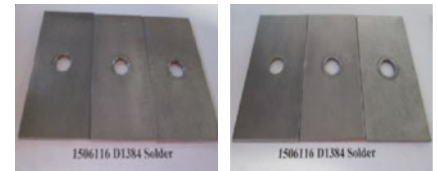
### Simulated Service Corrosion Testing of Engine Coolants - ASTM D 2570

ASTM D 2570 Test Results as Weight Loss (mg)					
ASTM D 2570	Specimen Corrosion Weight Loss (mg)				
Specimen	#1	#2	#3	Avg	Max**
Copper	1	1	2	1	20
30a Solder	11	15	12	13	60
Brass	1	1	1	1	20
Steel	0	1	1	1	20
Cast Iron	1	0	2	1	20
Cast Aluminium	0	0	0	0	60

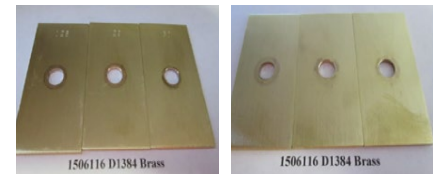
Copper



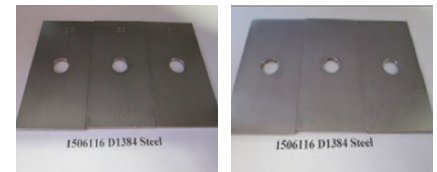
Solder



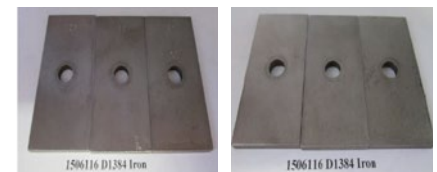
Brass



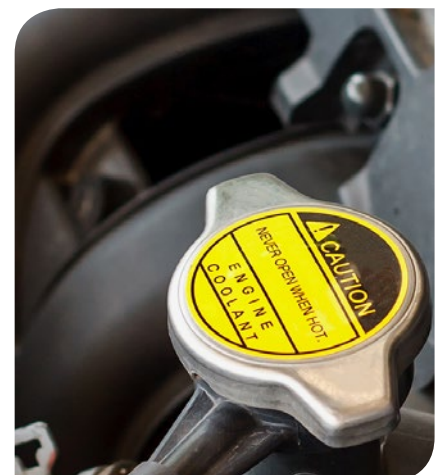
Steel



Cast Iron



Cast Aluminium



## STORAGE

CAFLON HDC100 has a shelf life of two years when stored in originally closed, air-tight containers at temperatures  $\leq 30^{\circ}\text{C}$ .

## AVAILABILITY

### 20 & 25 LITRE KEGS



### 1000 LITRE IBC's



### 205 LITRE DRUMS



### BULK



Mixing **CAFLON HDC100** with other coolants is not recommended.

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