



# CAFLON Si-OAT

Long life Antifreeze with Organic Acid  
Technology and Silicates

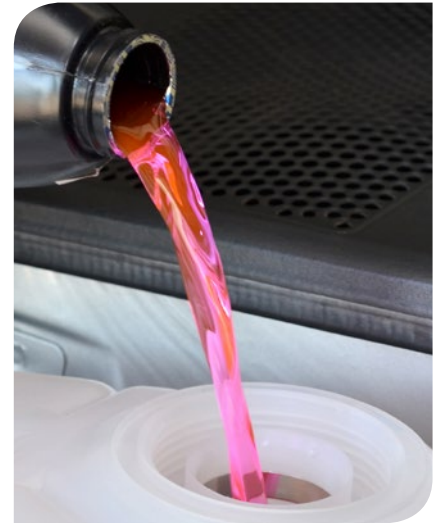
## CAFLON Si-OAT

- Is an ethylene glycol based coolant concentrate formulated for use in all engines 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 an inhibitor package based on salts of Organic Acid's and silicates.
- Is supplied **pink/red** in colour and contains a bittering agent.

### Performance, Features & Benefits:

- Offers outstanding protection against corrosion, overheating and frost.
- Is a 'Long life' coolant due to the slow depletion rates of the OAT inhibitors versus traditional inorganic / mineral variants.
- Adopts low silicate technology that boosts overall corrosion protection (in particular against aluminium).
- 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 Nitrite, Amine, Phosphate (NAP) and Borate free.
- Has excellent hard water stability.
- Exceeds the requirements of most European and International Standards, including – BS:6580 (2010); ASTM D3306, SAE J1034, ASTM D6210, AFNOR NF R15601 (with the exception of reserve alkalinity).
- Meets the performance requirements of Cummins CES14603, MAN 324 Typ Si-OAT, Scania TB 145, MTU MTL 5048, VW TL 774-G

Typical Properties (Not a Specification)	CAFLON Si-OAT	ASTM D3306
Appearance @ 20°C	Clear pink/red liquid (*)	Not specified
Relative Density 15.5/15.5°C (60/60°F)	1.120	1.110 – 1.145
Freezing Point [°C] 50 vol % in DI water	-38.0	-36.4°C max
Boiling Point [°C] 50 vol % in DI water	109°C	108°C min
pH (neat)	8.8	Not specified
pH, 50 vol % in DI water	8.4	7.5 – 11.0
pH, 33 vol % in DI water	8.2	
Reserve Alkalinity @ pH 5.5	3.8	Report
Water [% w/w – Karl Fischer]	3.5	5.0 max
Flash Point [°C]	>120	
Foaming Properties (ASTM D1881) Vol. (ml)	40	150 max
Break (s)	1	5 max



### DILUTION

CAFLON Si-OAT 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 Si-OAT can also be supplied pre-diluted

**CORROSION PROTECTION**

**Glassware Corrosion Test - ASTM D 1384**

**ASTM D 1384<sup>1</sup> Test Results**

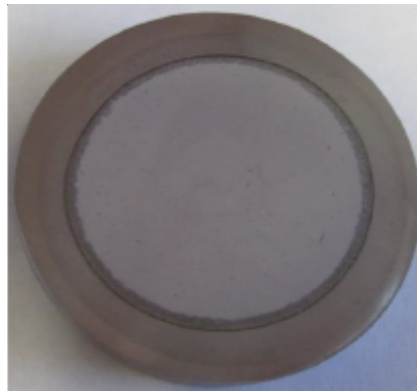
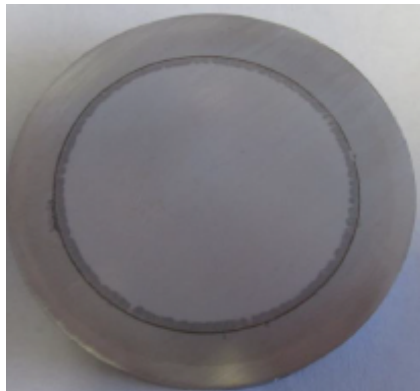
ASTM D 1384	Specimen Corrosion Weight Loss (mg)				
Specimen	#1	#2	#3	Avg	Max**
Copper	0	0	0	0	10
Solder	0	0	0	0	30
Brass	1	0	1	1	10
Steel	0	0	0	0	10
Cast Iron	0	1	0	0	10
Cast Aluminium	-2	-2	-2	-2	30

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

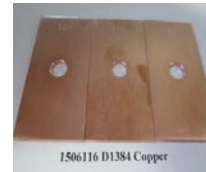
**Corrosion of Aluminium under Heat Rejecting Conditions - ASTM D 4340**

**ASTM D 4340<sup>1</sup> Test Results**

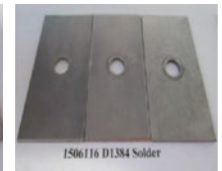
Run #1 Weight Loss (mg/cm <sup>2</sup> /wk)	Run #2 Weight Loss (mg/cm <sup>2</sup> /wk)	Average Weight Loss (mg/cm <sup>2</sup> /wk)	ASTM Limit ** (mg/cm <sup>2</sup> /wk)
-0.07	-0.02	-0.04	1.00
pH After (1)	pH After (2)	Appearance	
8.05	8.05	No Visible Deposit	



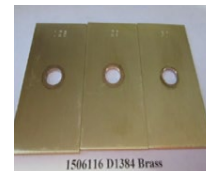
Copper



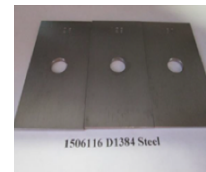
Solder



Brass



Steel



Cast Iron



Cast Aluminium





## STORAGE

CAFLON Si-OAT 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 Si-OAT** with other coolants is not recommended.

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