

## PRODUCT SHEET

Updated in May 2009

### CALOP 30D –COOLANT FOOD QUALITY

1/3

#### **DEFINITION/USES:**

CALOP 30D is a READY TO USE coolant with an inhibited glycol mono propylene base.

It does not include nitrates, amines and phosphates.

Thanks to its high-performance formula, CALOP 30D meets the main water system requirements:

- **Bactericidal and Fungicidal** action limiting the development of silt in low temperature systems (<40 C°) such as **heated flooring**.
- **Anti-tarter, Anti-corrosion** action limiting the risks of obstruction and alteration of the different materials comprising the systems.
- **Anti-freeze** action allowing bursting risks of parts comprising the systems to be limited.

#### **Uses:**

- Improvement of the calorific transfer power in heating or cooling systems.
- Antifreeze for central heating systems for the production of domestic hot and/or cold water.
- Refrigerant fluid for air conditioning or refrigerating systems.
- Coolant for solar panels, geothermal energy, fuel cells.

#### **REGULATIONS/VALIDATIONS:**

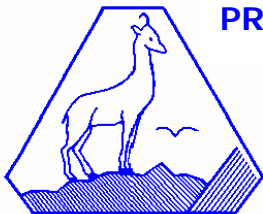
CALOP 30D is formulated using a MB444D fluid base validated by the Ministry of Health (Decree dated 14/03/2008).

favourable recommendation of the AFSSA 2007-SA-0152 (dated 26/02/2008)

Pre-recording REACH (25/11/2008)

#### **APPEARANCE:**

Red coloured clear liquid.



## PRODUCT SHEET

Updated in May 2009

### CALOP 30D –COOLANT FOOD QUALITY

2/3

#### PACKAGING:

20 LITRES/30 JERRICANS per pallet EUR  
210 LITRES/2 or 4 BARRELS per pallet EUR  
1000 LITRES/1 CONTAINER per pallet  
LOOSE 5 to 24 tonnes

To hold safe from the light and heat

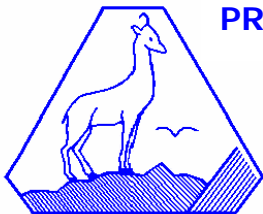
#### INSTRUCTIONS FOR USE:

- Do not dilute CALOP 30D. This coolant should be directly injected into the installation after cleaning the latter.
- For good protection of the installations, to control every five years.
- Keep out of reach of children.

#### PHYSICAL and CHEMICAL CHARACTERISTICS:

CHARACTERISTICS	UNITS	SPECIFICATIONS	TEST METHODS
Pure volumic mass at 20°C	g/l	1 032+/-4	NF R 15-602-1
pH	pH	7.5+/-1	NF T 78-103
Alkalinity level	ml	≥14	NF T 78-101
Water content	% mass	60 max	NF T 78-104
Boiling point	°C	107 +/-2	NF R 15-602-4

Test tube corrosion test (NF R15-602/91)	Variation in mg/test tube
Copper	0.1
Brass	-0.2
Cast iron aluminium	0.6
Cast iron	0.8
Steel	2.4
Solder	-0.2



## PRODUCT SHEET

Updated in May 2009

### CALOP 30D –COOLANT FOOD QUALITY

3/3

#### PHYSICAL AND CHEMICAL CHARACTERISTICS:

Freezing points (NF T 78-102)	C°
In vol. 80 % CALOP 30D + 20 % WATER (density: 1 026 g/l)	-12 +/-2
In vol. 90 % CALOP 30D + 10 % WATER (density: 1 029 g/l)	-15 +/-2
CALOP 30D (density: 1 032 g/l)	-18 +/-2
In vol. 90 % CALOP 30D + 10 % MB444D (density: 1 036 g/l)	-25 +/-2
In vol. 80 % CALOP 30D + 20 % MB444D (density: 1 041 g/l)	-32 +/-2
In vol. 70 % CALOP 30D + 30 % MB444D (density: 1 044 g/l)	-41 +/-2

Viscosity CALOP 30D	Pascal second
at 80 °C	0.7
at 40 °C	1.6
at 30 °C	2.3
at 10 °C	4.9
at 0 °C	7
at - 10 °C	10.2

°C	Specific heat in J/kg/K
-18	3770
0	3933
15	4029
30	4097
45	4150
60	4195
75	4244
90	4292
105	4332

Protection from bacteria test	Mo/ml	Without treatment	With CALOP 30D
Inoculation No. 1 after 1 day	2.4 10 <sup>9</sup>	Rare development	No development
Inoculation No. 2 after 1 day	2.5 10 <sup>9</sup>	Moderate development	No development
Inoculation No. 3 after 1 day	2.5 10 <sup>9</sup>	Total development	No development
Protection from fungi test			
Fungic standard inoculation		Total development	No development

The information given in this technical sheet results from our knowledge of the products and our experience. The characteristics obtained in situ may vary depending on the implementation conditions. In case of application not explicitly foreseen in the present document, it is the duty of our customers to inform themselves or to carry out representative prior tests. The information in this sheet can in no case imply a guarantee from us as regards the use of our products. It results in no exemption from our general sales terms and conditions. Before any implementation, it is recommended to check that the present sheet has not been replaced by a more recent version.