



SAFETY DATA SHEET CAFLON HTF PG BLUE 50%

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name CAFLON HTF PG BLUE 50%

Product number 53023

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Cooling / Heating medium and Antifreeze.

1.3. Details of the supplier of the safety data sheet

Supplier Univar
Aquarius House
6 Mid Point Business Park
Bradford
BD3 7AY
+44 1274 267300
+44 1274 267306
sds@univar.com

1.4. Emergency telephone number

Emergency telephone SGS - +32 (0)3 575 55 55 (24h)

Sds No. 53023

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

2.2. Label elements

Hazard statements NC Not Classified

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

CAFLON HTF PG BLUE 50%

MONOPROPYLENE GLYCOL			30-60%
CAS number: 57-55-6	EC number: 200-338-0	REACH registration number: 01-2119456809-23-XXXX	
Classification Not Classified			

2-ETHYLHEXANOIC ACID, SODIUM SALT			1-5%
CAS number: 19766-89-3	EC number: 243-283-8	REACH registration number: 01-2119488942-23-XXXX	
Classification Repr. 2 - H361d			

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures
4.1. Description of first aid measures

Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothing. Rinse with water. Get medical attention if any discomfort continues.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

4.2. Most important symptoms and effects, both acute and delayed

Eye contact	May cause temporary eye irritation.
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4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures
5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.
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5.3. Advice for firefighters

Protective actions during firefighting	Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions For personal protection, see Section 8.

6.2. Environmental precautions

Environmental precautions Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Flush contaminated area with plenty of water.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Good personal hygiene procedures should be implemented.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store in closed original container at temperatures between 0°C and 40°C.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

MONOPROPYLENE GLYCOL

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ particulate

Long-term exposure limit (8-hour TWA): WEL 150 ppm 474 mg/m³ total vapour and particulates

SODIUM HYDROXIDE

Short-term exposure limit (15-minute): WEL 2 mg/m³

WEL = Workplace Exposure Limit

MONOPROPYLENE GLYCOL (CAS: 57-55-6)

DNEL

General population - Inhalation; Long term systemic effects: 50 mg/m³

General population - Inhalation; Long term local effects: 10 mg/m³

Workers - Inhalation; Long term systemic effects: 168 mg/m³

Workers - Inhalation; Long term local effects: 10 mg/m³

General population - Dermal; Long term systemic effects: 213 mg/m³

General population - Oral; Long term systemic effects: 85 mg/m³

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PNEC	- Fresh water; 260 mg/l
	- Marine water; 26 mg/l
	- STP; 20000 mg/l
	- Sediment (Freshwater); 572 mg/kg
	- Sediment (Marinewater); 57.2 mg/kg
	- Soil; 50 mg/kg
	- Intermittent release; 183 mg/l

METHYL 1H BENZOTRIAZOLE (CAS: 29385-43-1)

DNEL	Workers - Dermal; Long term systemic effects: 0.5 mg/kg/day
	Workers - Inhalation; Long term systemic effects: 8.8 mg/m ³
	Consumer - Oral; Short term systemic effects: 0.25 mg/kg/day
	Consumer - Oral; Long term systemic effects: 0.25 mg/kg/day
	Consumer - Dermal; Long term systemic effects: 0.25 mg/kg/day
	Consumer - Inhalation; Long term systemic effects: 4.4 mg/m ³

PNEC	- Fresh water; 0.008 mg/l
	- Marine water; 0.008 mg/l
	- Intermittent release; 0.086 mg/l
	- Sediment (Freshwater); 0.0025 mg/kg/day
	- Sediment (Marinewater); 0.0025 mg/kg/day
	- Soil; 0.0024 mg/kg/day
	- STP; 39.4 mg/l

DIHYDROGEN (ETHYL)[4-[4-[ETHYL(3-SULPHONATOBENZYL)]AMINO]-2'-SULPHONATOBENZHYDRYLIDENE]CYCLOHEXA-2,5-DIEN-1-YLIDENE](3-SULPHONATOBENZYL)AMMONIUM, DISODIUM SALT (CAS: 3844-45-9)

Ingredient comments	No exposure limits known for ingredient(s).
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SODIUM HYDROXIDE (CAS: 1310-73-2)

Ingredient comments	WEL = Workplace Exposure Limits
DNEL	Consumer - Inhalation; Long term local effects: 1 mg/m ³
	Workers - Dermal; Short term local effects: 2 mg/kg/day
	Workers - Inhalation; Short term local effects: 2 mg/m ³
	Workers - Inhalation; Long term local effects: 1 mg/m ³

8.2. Exposure controls

Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. EN 166
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. EN 374 Rubber (natural, latex). Neoprene. Polyvinyl chloride (PVC).
Respiratory protection	No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. It is recommended to use respiratory equipment with combination filter, type A2/P2. EN 136/140/141/145/143/149

SECTION 9: Physical and Chemical Properties**9.1. Information on basic physical and chemical properties**

Appearance	Liquid.
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CAFLON HTF PG BLUE 50%

Colour	Blue.
Odour threshold	Data lacking.
pH	pH (concentrated solution): 7.5 - 9.0
Melting point	Not relevant.
Initial boiling point and range	No information available.
Flash point	No information available.
Evaporation rate	Data lacking.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	Data lacking.
Vapour density	No information available.
Relative density	1.040 @ 20°C
Bulk density	No information available.
Solubility(ies)	Soluble in water.
Partition coefficient	Not known.
Auto-ignition temperature	No information available.
Decomposition Temperature	Data lacking.
Viscosity	Data lacking.
Explosive properties	Data lacking.
Explosive under the influence of a flame	No information available.
Oxidising properties	Not known.

9.2. Other information

Other information	Not available.
Refractive index	No information available.
Particle size	No information available.
Molecular weight	No information available.
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

CAFLON HTF PG BLUE 50%

Reactivity Hygroscopic.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents. Strong acids. Strong alkalis.

10.6. Hazardous decomposition products

Hazardous decomposition products Aldehydes. Alcohols. Ethers. Acids.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Skin corrosion/irritation**

Animal data No information available.

Serious eye damage/irritation

Serious eye damage/irritation No information available.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No information available.

Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation May cause respiratory system irritation.

Ingestion Gastrointestinal symptoms, including upset stomach.

Skin contact Slightly irritating.

CAFLON HTF PG BLUE 50%

Eye contact May cause temporary eye irritation.

Toxicological information on ingredients.**MONOPROPYLENE GLYCOL****Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 22,000.0

Species Rat

ATE oral (mg/kg) 22,000.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rabbit

Skin corrosion/irritation

Animal data Not irritating. OECD 404

Serious eye damage/irritation

Serious eye damage/irritation Not irritating.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity There is no evidence that the product can cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion May cause discomfort if swallowed.

Skin contact Prolonged skin contact may cause temporary irritation.

Eye contact May cause temporary eye irritation.

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SECTION 12: Ecological Information

Ecotoxicity The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Ecological information on ingredients.

MONOPROPYLENE GLYCOL

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity Not considered toxic to fish.

Ecological information on ingredients.

MONOPROPYLENE GLYCOL

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 40613 mg/l, Oncorhynchus mykiss (Rainbow trout)
LC₅₀, 96 hour: 55770 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: > 4000 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 96 hours: 19000 mg/l, Scenedesmus subspicatus
NOEC, 96 hour: 15000 mg/l, Scenedesmus subspicatus

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 7 days: 13020 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

Ecological information on ingredients.

MONOPROPYLENE GLYCOL

Persistence and degradability The substance is readily biodegradable.

Biodegradation - Degradation 81%: > 28 days
OECD 301F
- Degradation 96%: 64 days

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not known.

Ecological information on ingredients.

MONOPROPYLENE GLYCOL

Bioaccumulative potential The product is not bioaccumulating. BCF: < 100,

Partition coefficient log Pow: -1.07

CAFLON HTF PG BLUE 50%**12.4. Mobility in soil**

Mobility The product is soluble in water.

Ecological information on ingredients.**MONOPROPYLENE GLYCOL**

Mobility The product is soluble in water.

Henry's law constant 0.00566 atm m³/mol @ 12°C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.**MONOPROPYLENE GLYCOL**

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.**MONOPROPYLENE GLYCOL**

Other adverse effects No information required.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

General information Waste should be treated as controlled waste.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

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Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78
and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

CAFLON HTF PG BLUE 50%**Abbreviations and acronyms
used in the safety data sheet**

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

**Classification abbreviations
and acronyms**

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

**Key literature references and
sources for data**

Supplier's information.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

20/11/2017

Version number

1.000

SDS number

53023

SDS status

Approved.

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Hazard statements in full	H361d Suspected of damaging the unborn child.
Signature	Jitendra Panchal