



SAFETY DATA SHEET CAFLON HTF PG

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

1.1. Product identifier

Product name CAFLON HTF PG

Product number 12464

REACH registration notes This product is not classified as hazardous, the information in this datasheet is given for guidance only.

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. 12464

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

MONOPROPYLENE GLYCOL			60-100%
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.

Composition comments The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if any discomfort continues.
Skin contact	Remove affected person from source of contamination. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of 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.
--------------------	-------------------------------------

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
-----------------------------	------------------------

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

Specific hazards	When heated and in case of fire, toxic vapours/gases may be formed.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of the following substances: Carbon.

5.3. Advice for firefighters

CAFLON HTF PG

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

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. 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. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Provide adequate ventilation. Avoid contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet.

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.

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

WEL = Workplace Exposure Limit

Ingredient comments Observe any occupational exposure limits for the product or ingredients.

MONOPROPYLENE GLYCOL (CAS: 57-55-6)

CAFLON HTF PG

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
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

ETHYLENE OXIDE AND PROPYLENE OXIDE COPOLYMER (CAS: 9003-11-6)

Ingredient comments	No exposure limits known for ingredient(s).
----------------------------	---

DENATONIUM BENZOATE (CAS: 3734-33-6)

Ingredient comments	No exposure limits known for ingredient(s).
----------------------------	---

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Rubber (natural, latex). Neoprene. Polyvinyl chloride (PVC). To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear suitable coveralls to prevent exposure to the skin.

Hygiene measures

Wash at the end of each work shift and before eating, smoking and using the toilet. Remove contaminated clothing and protective equipment before entering eating areas. Eye wash facilities and emergency shower must be available when handling this product.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. 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.
-------------------	---------

CAFLON HTF PG

Colour	Colourless.
Odour	Mild.
Odour threshold	No information available.
pH	pH (diluted solution): 7.7 - 8.5 (33%)
Melting point	-33°C
Initial boiling point and range	140°C
Flash point	>100°C
Evaporation rate	No information available.
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	No information available.
Vapour density	> 1
Relative density	1.043 -1.047 @ 20°C
Bulk density	No information available.
Solubility(ies)	Soluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	No information available.
Explosive properties	No information available.
Explosive under the influence of a flame	No information available.
Oxidising properties	No information available.

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

CAFLON HTF PG

10.1. Reactivity

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 Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of the following substances: Carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects No information available.

Skin corrosion/irritation

Skin corrosion/irritation 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 Gas or vapour in high concentrations may irritate the respiratory system.

CAFLON HTF PG

Ingestion May cause discomfort if swallowed.

Skin contact Liquid may irritate skin.

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

Notes (oral LD₅₀) LD₅₀ 22000 mg/kg, Oral, Rat LD₅₀ 19700 mg/kg, Oral, Guinea pig

ATE oral (mg/kg) 22,000.0

Acute toxicity - dermal

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

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ 41 mg/l, Inhalation, Rat

Skin corrosion/irritation

Animal data Not irritating. Rabbit OECD 404

Serious eye damage/irritation

Serious eye damage/irritation Not irritating. Rabbit OECD 405

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising. Guinea pig OECD 406

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties. Ames test Negative. OECD 473

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

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.

CAFLON HTF PG

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.

SECTION 12: Ecological information

Ecotoxicity	The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects 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	No information available.
-----------------	---------------------------

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 EC50, 96 hour: 19100 mg/l, Skeletonema costatum NOEC, 96 hour: 15000 mg/l, Scenedesmus subspicatus NOEC, 14 day: < 5300 mg/l, Skeletonema costatum
--	---

Acute toxicity - microorganisms	NOEC, 18 hour: > 20000 mg/l, Pseudomonas putida
--	---

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates	NOEC, 7 days: 13020 mg/l, Daphnia magna NOEC, 7 day: 29000 mg/l, Freshwater invertebrates Ceriodaphnia sp.
---	--

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.
--------------------------------------	---

CAFLON HTF PG

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

- Degradation 96%: 64 days

Biological oxygen demand BOD5: 1170 mg O₂/l

Chemical oxygen demand 4700 mg O₂/l

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

Ecological information on ingredients.

MONOPROPYLENE GLYCOL

Bioaccumulative potential The product is not bioaccumulating. BCF: < 0.09,

Partition coefficient log Pow: -1.07

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.

Adsorption/desorption coefficient - K_{oc}: 2.9 @ 20°C - Log K_{oc}: 0.46 @ 20°C

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. Do not puncture or incinerate, even when empty.

CAFLON HTF PG

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

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 Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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

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

05/04/2019

Version number

2.000

Supersedes date

20/05/2018

SDS number

12464

CAFLON HTF PG

SDS status

Approved.

Hazard statements in full

H361d Suspected of damaging the unborn child.

Signature

Lisa Bland