SAFETY DATA SHEET

(in accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) and its amendments)

MPG

Section 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/ UNDERTAKING

1.1 Product identifier

Product identifier:	MONOPROPYLENE GLYCOL
Chemical formula:	Propylène glycol, Propane-1,2-diol
Synonym(s):	CALOTECH MPG PUR inhibit
	CALOTECH MPG -20° inhibit

1.2 Relevant identified uses of the substance and uses advised against

Identified uses:
Anti-freezing agents

Recommended use restriction: use reserved for industrial or professional users.

1.3 Details of the supplier of the safety data sheet

Name:	**CALORIE FLUOR**
Address:	411 rue Clément Ader
	FR – 78530 BUC
Phone:	+33 /1 39 24 16 70
Fax:	+33 /1 39 56 07 18
e-mail address:	service.commercial@calorie-fluor.fr
Web Site:	http://www.calorie-fluor.fr

1.4 Emergency phone number

Phone:	Outside the U.S.: 1-703-527-3887 (CHEMTREC)

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or the mixture

Classification of the substance according to CLP (1272/2008/EC):
The product is not classified as dangerous according to Regulation (EC) No. 1272/2008.

2.2 Label elements

The product is not labeled as dangerous according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

No other informations

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Chemical name (chemical formula)	Propylene glycol (propane-1,2-diol)
CAS number	57-55-6
CE number	200-338-0
Reach registration number	01-2119456809-23
Concentration%	10 - 100%
Classification Regulation (EC) N°1272/2008	Non classé

Section 4. FIRST AID MEASURES

Generally, in case of doubt or if symptoms persist, always call a doctor.
Never give anything by mouth to an unconscious person.

4.1 Description of necessary first-aid measures

Inhalation:
Move the person away from the contaminated area, to breathe fresh air. Oxygen or artificial respiration if needed. Consult a physician.
Contact with the skin:
Take off all contaminated clothing immediately. Wash immediately, abundantly and thoroughly with water.
Contact with the eyes:
Wash immediately, abundantly and thoroughly with water. If irritation persists, consult an ophthalmologist.
Ingestion:
Rinse mouth with water. Never give anything by mouth to an unconscious person. Don't induce vomiting. Consult a physician if necessary.
Rescuers protection:
In case of insufficient ventilation, wear suitable respiratory equipment.

4.2 Most important symptoms and effects, both acute and delayed

See section 11.

4.3 Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

Section 5. FIREFIGHTING MEASURES

5.1 Firefighting measures

Suitable extinguishing media:
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Cool containers / tanks with water spray.
Unsuitable extinguishing media: None

5.2 Special hazards arising from the substance or mixture

This product is not flammable in air under ambient conditions of temperature and pressure.
Hazardous decomposition products formed under fire conditions

- Carbon monoxide
- Carbon dioxide

5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective clothing.
Wear chemical-resistant outerwear.

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel not required or not equipped with personal protection.
Provide adequate ventilation.
Avoid contact with skin, eyes and inhalation of fumes.
Remove all ignition sources. Do not smoke

6.2 Environmental precautions

Do not dump into the environment.
Avoid spills or leaks.
Retain and dispose of contaminated washing water.

6.3 Methods and material for containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material, (sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Pick up and transfer to properly labelled containers.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for information on disposal and treatment of waste.

Section 7. HANDLING AND STORAGE

The regulations relating to storage premises apply to workshops where the mixture is handled.

7.1 Precautions for safe handling

Advice on safe handling:	Keep container tightly closed. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.
Hygiene measures:	Keep away from food, drink and animal feeding stuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

Store well-closed containers in a dry and well-ventilated place. Store in the original container.
Keep away from heat and ignition sources. Avoid direct exposure to the sun.
Do not smoke.

7.3 Specific end use(s)

None.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limit values

Propane-1,2-diol: Contains no substances with occupational exposure limit values

Derived No Effect Level (DNEL)

	Component	inhalation	Skin contact	Ingestion
End Use	**Workers**	168 mg/m³ (LT, SE) 10 mg/m³ (LT, LE)		
	Consumers	50 mg/m³ (LT, SE) 10 mg/m³ (LT, LE)	213 mg/kg (LT, SE)	85 mg/kg (LT, SE)

LE: Local effects, SE: Systemic effects, LT: Long-term, ST: short-term

Predicted No Effect Concentration (PNEC)

Composant	Propane-1,2-diol
Fresh water	260 mg/l
Sea water	26 mg/l
Water (intermittent release)	183 mg/l
Effects on wastewater treatment plants	2000 mg/l
Fresh water sediment	572 mg/kg
Soil	50 mg/kg
Marine sediment	57,2 mg/kg
Secondary poisoning extrapolated	1333 mg/kg

dw: dry weight

8.2 Exposure controls

Appropriate engineering controls:

Ensure adequate ventilation. Ensure access to an eye shower.

Respiratory protection:

If ventilation is inadequate, use a respirator protection.

The vapours are heavier than air and can cause suffocation by lowering the oxygen content.

If risk of splash contact:

Hand Protection:

Protective gloves

Eye protection:

Safety glasses with side shields

Skin and body protection:

Wear suitable clothing to protect against splashes and contamination.

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Do not smoke during use.

Personal protective equipment:

Eye protection
Wear protective eyewear (goggles, face shield, or safety glasses).

Skin protection
Wear protective gloves

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information of basic physical and chemical properties

Appearance:	
Physical state (20°C):	Liquid
Form:	Liquid
Colour:	Colourless, or, coloured, red, blue, yellow
Odour:	Oudourless
Boiling point / range:	100-188°C
Density:	1.04 g/cm^3
Auto-ignition temperature:	>371°C
Decomposition temperature:	not determined
Flash point:	>100°C
Flammability:	Non-flammable product
Upper explosion limit/ upper flammability limit*	12.6%
Lower explosion limit/ lower flammability limit*	2.4 %
Oxidizing properties:	Non-oxidizing product
Water solubility:	not applicable

**Given the high flash point and for use at room temperature, this substance will never emit enough vapors to constitute an explosive atmosphere capable of igniting in the presence of an ignition source. (INRS TOXIC SHEET 2020)*

9.2 Other information

not determined

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions of storage and handling.

10.2 Chemical stability

Product stable at room temperature

10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.
Reaction type: polymerisation

10.4 Conditions to avoid

Avoid moisture. Exposure to light. Exposure to air. Keep away from heat and sources of ignition. Keep away from direct sunlight.

10.5 Incompatible materials

Strong acids, Strong bases, Strong oxidizing agents

10.6 Hazardous decomposition materials

Hazardous decomposition products: Aldehydes, Alcohols, Organic acids

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Component : propane-1,2,-diol

Oral :	DL50 : 22 000 mg/kg (rat)
Inhalation:	CL50 : > 317 042 mg/l (rabit, 2 h)
Skin :	DL50 : > 2 000 mg/kg (rabit)

Corrosion / skin irritation and severe eye damage / eye irritation:

No skin irritation (Rabbit) (OECD Test Guideline 404)
No eye irritation (Rabbit) (OECD Test Guideline 405)

Respiratory or skin sensitization:

Does not cause skin sensitisation. (Maximisation Test; Guinea pig) (OECD Test Guideline 406)

Mutagenicity on germ cells

Not classified on the basis of available information.

Carcinogenicity

Not classified on the basis of available information.

Reproductive toxicity

Not classified on the basis of available information.

Specific target organ toxicity (STOT), Repeated dose toxicity

Single or repeated exposure. Not classified on the basis of available information.

Aspiration toxicity

Not classified on the basis of available information

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Component	propane-1,2,-diol
Fish CL50, 96h Species Method	 40 613 mg/l Oncorhynchus mykiss (rainbow trout) static test; OECD Test Guideline 203)
Aquatic invertebrates CL50, 48h Species Method	 18 340 mg/l Ceriodaphnia dubia (water flea) static test; OECD Test Guideline 202
Aquatic plants CE50, 96h Species Method	 19 000 mg/l Pseudokirchneriella subcapitata (green algae); static test; End point: Growth rate; OECD Test Guideline 201
Aquatic plants CE50, 96h Species Method	 19 100 mg/l Skeletonema costatum

12.2 Persistence and degradability

81 % (anaerobic; Exposure Time: 28 d) (OECD Test Guideline 301F) Readily biodegradable.
The 10 day time window criterion is fulfilled.
96 % (Exposure Time: 64 d)(OECD Test Guideline 306)

12.3 Bioaccumulation potential

Noticeable evaporation from aqueous solutions into the atmosphere is in not expected.

12.4 Mobility in the soil

Not determined

12.5 Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulative and toxic (PBT) or very persistent, very bioaccumulative (vPvB).

12.6 Endocrine Disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

Section 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product:	Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.
Contaminated packaging:	Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. If recycling is not practicable, dispose of in compliance with local regulations.
European Waste Catalogue Number:	No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

Section 14. TRANSPORT INFORMATION

Not dangerous goods for ADR, RID, IMDG and IATA.

14.1 Label

Not applicable.

14.2 RID / ADR

Not applicable.

14.3 AND

Not applicable.

14.4 IMDG

Not applicable.

14.5 IATA-DGR

Not applicable.

14.6 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

European legislation

- **CLP Regulation:**
  - *Regulation (CE) No 1272/2008 of the European Parliament and of the Council of 16 December 2008* on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/CE and 1999/45/EC and amending Regulation (CE) No 1907/2006, with amendments.

- **REACH regulation**:
  - *Regulation (CE) 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), establishing a European Chemicals Agency, amending Directive 1999/45/CE and repealing Council Regulation (CEE) No 793/93 and Commission Regulation (CE) No 1488/94 as well as Council Directive 76/769/EEC and Directives Commission 91/155/CEE, 93/67/CEE, 93/105/EC and 2000/21/CE, with amendments.

- **REACH (article 59)** – Candidate list of substance of very hight concern for authorisation : **not applicable**
- **REACH (Annex XIV)** – List of substances subject to authorisation : **not applicable**
- **REACH (Annex XVII)** – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles: **not applicable**

15.2 Chemical safety assessment

Satisfying neither the classification criteria for health and the environment, or the criteria for PBT or vPvB in accordance with Article 14 (3) of the REACH Regulation, specific exposure scenarios have not been developed.

Section 16. OTHER INFORMATION

16.1 SDS update

Revision date: **January 2023** – Revision index: **4**

Nature of change:

SDS sections that have been updated		Type
1.2	Uses	Use reserved for industrialists and professionals
6.2	Precautions for environmental protection	Protection Supplements
9.1	Information of basic physical and chemical properties	Add flammability
10.4	Stability and responsiveness	Additional information on conditions to be avoided
11.1	Information on toxicological effects	New results
12	Ecological information	Add
15.1	Regulatory Information	Regulation

16.2 Abbreviations and acronyms

VLE: Threshold Limit Value, maximum concentration that can be achieved for up to 15 minutes, in the workplace
VME: exposure, maximum permissible average concentration of 8 hours, 40 hours per week in the workplace
TLV: Threshold Limit Value
TWA: Time Weighted Average, average concentration not to exceed a period of 6 hours 40 hours per week
DNEL: Derived No Effect Level (Derived No Effect)
PNEC: Predicted No Effect Concentration
NOAEL: No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
LD50: Lethal Dose 50 = ingested or injected dose killing 50% of the tested population
LC50: Lethal Concentration 50 = concentration causing the death of 50% of the test population
CSTL: Cardiac Sensitisation Threshold Limit
STOT: Specific Target Organ Toxicity
GWP: Global Warming Potential
ODP: Ozone Destruction Potential
PBT: Persistent, Bioaccumulative, Toxic
vPvB: very Persistent and very Bioaccumulative
ADR: European Agreement concerns the International Carriage of Dangerous Goods by Road
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Goods by Inland Waterways
IMDG: International Maritime Dangerous Goods code
IATA: International Air Transport Association

16.3 Full text of relevant H-Statements

The product is not classified as dangerous according to Regulation (EC) No. 1272/2008.

NOTE: In case of formulations or mixtures, make sure that no new dangers can arise.

The information given in this sheet are given in good faith and based on our knowledge of the product, at the date of publication.

The user's attention is drawn to the risks incurred when a product is used for purposes other than those for which it is intended. This sheet shall only be used and reproduced for prevention and security. The list of laws, regulations and administrative cannot be considered exhaustive. It is the recipient of the product to refer to all official documents concerning the use, possession and handling of the product for which it is responsible.

The user must also bring to the attention of those who may come into contact with the product (usage, storage containers, and other processes) all information necessary to safety, protection of health and environment, by providing them with the safety data sheet.