SAFETY DATA SHEET

Inhibited Glycol - MEG 98% + Inhibitor 2%

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

1.1 Product identifier

Trade name: Inhibited Glycol - MEG 98% + Inhibitor 2%

Product type: Monoethylene glycol based antifreeze/coolant with Organic Acid Technology (OAT) inhibitors

Product code: MEG98+2

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

Identified uses:
Heat transfer fluid for closed-loop heating, cooling, refrigeration, and HVAC systems; corrosion-protected antifreeze for chillers, solar heating, and refrigeration plants.

Uses advised against:
Use in open systems where vapours may be released; potable water or direct food contact; automotive engine coolant (different inhibitor balance required).

1.3 Details of the supplier of the safety data sheet

Fluid Science Limited
Unit 3b Arbour Court
Arbour Lane
Knowsley Industrial Park
Kirkby
L33 7XE
Tel: +44 (0)1244 506 860 (General Enquiries)
Email: sales@fluidscienceltd.com

1.4 Emergency telephone number

In the UK: NHS 111 (for medical advice)
Chemical emergencies: +44 (0)870 190 6777 (National Chemical Emergency Centre, 24/7, English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture (Regulation (EC) No 1272/2008):

Hazard class	Category
Acute Tox.4	Category 4 (H302)
STOT RE 2	Category 2 (H373)
Repr.2	Category 2 (H361d)
Aquatic Chronic 3	Category 3 (H412)

2.2 Label elements:

Signal word: Warning

GHS07 GHS08 GHS09

Hazard Statements:

H302: Harmful if swallowed.

H361d: Suspected of damaging the unborn child.

H373: May cause damage to kidneys through prolonged or repeated exposure.

H412: Harmful to aquatic life with long lasting effects.

Precautionary statements:

P201: Obtain special instructions before use.

P260: Do not breathe vapours/spray.

P273: Avoid release to the environment.

P280: Wear protective gloves/clothing/eye protection.

P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell

P308+P313: IF exposed or concerned: Get medical advice/attention.

P314: Get medical advice/attention if you feel unwell.

P405: Store locked up.

P501: Dispose of contents/container in accordance with local regulations.

2.3 Other hazards:

No PBT/vPvB substances.

No identified endocrine disruptors.

SECTION 3: Composition/information on ingredients

Component	CAS No	EC No	% w/w	Classification
Monoethylene Glycol (MEG)	107-21-1	203-473-3	98.04%	Acute Tox. 4 (H302); STOT RE 2 (H373).
Methyl-1H-benzotriazole (inhibitor)	Mixture	-	1.96%	Acute Tox. 4 (H302); Repr. 2 (H361d); Aquatic Chronic 3 (H412).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Remove affected person from source of contamination. Keep warm and at rest
Inhalation	Move to fresh air, keep at rest. Seek medical attention if symptoms occur.
Ingestion	Rinse mouth. Do not induce vomiting. Seek medical advice.
Skin contact	Remove contaminated clothing. Wash skin thoroughly with soap and water.
Eye contact	Rinse cautiously with water for at least 15 minutes. Seek medical attention if irritation persists.
Reproductive Hazard	Pregnant workers should seek medical advice following significant exposure to the inhibitor.

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

General information	CNS depression, Headache, nausea, vomiting, Kidney damage from repeated or high-dose exposure, Ingestion: risk of metabolic acidosis, Reproductive toxicity concern due to inhibitor (H361d)

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

Monitor renal function, metabolic status and CNS effects. Ethylene glycol ingestion may require fomepizole or ethanol therapy.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Water Mist, foam, dry chemical, CO^2

Unsuitable extinguishing media:High-pressure water jet

5.2. Specific hazards arising from the substance or mixture

Specific Hazards: Thermal decomposition may release: CO, CO^2, nitrogen oxides, aldehydes and organic vapours.

Protective equipment: Firefighters should wear self-contained breathing apparatus (SCBA) and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin and eyes. Avoid inhalation of vapours. Provide adequate ventilation. Use correct PPE

6.2. Environmental precautions

Environmental Precautions	Prevent entry into soil, drains, or surface water. Notify authorities if significant spill occurs. Avoid releases due to the Aquatic Chronic classification.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Absorb with inert material. Place in labelled container for disposal. Wash area with water.

SECTION 7: Handling and storage

This product is designed exclusively for use in closed circuit heating, refrigeration, and cooling systems. Ensure the system is sealed to prevent vapour formation or leaks. Do not use in systems containing galvanised components unless corrosion inhibitor compatibility is confirmed.

7.1 Handling

Avoid spills and contact with skin and eyes. Ensure good ventilation. Do not breathe vapours or spray. Use in closed systems only. No eating, drinking, or smoking during handling. Pregnant and breastfeeding workers should not handle the concentrated inhibitor; small exposure from the diluted mixture still requires caution.

7.2. Conditions for safe storage

Store in original container, tightly closed, in a cool, dry, well-ventilated place. Protect from heat and strong oxidisers.

7.3. Incompatible Materials

Strong oxidisers, strong acids and nitrates.

SECTION 8: Exposure controls/Personal Protection

8.1. Control parameters Occupational exposure limits

Workplace Exposure Limit (WEL):
Ethylene Glycol Vapour: 20 ppm (52 mg/m³) TWA, 40 ppm (104 mg/m³) STEL (UK HSE EH40). Methyl-1H-benzotriazole DNEL/ PNEC:Workers DNEL dermal: 300 µg/kg bw/day; inhalation: 21.2 mg/m³; PNEC freshwater: 8 µg/L, etc.

8.2. Exposure controls

Respiratory Protection: Not required under normal conditions; A2/P2 respirator complying with EN 14387 (gas/vapour) and EN 149 (particulates) where vapours may be generated.

Hand Protection: Nitrile or butyl rubber gloves (EN 374).

Eye Protection: Safety goggles (EN 166).

Body Protection: Overalls or chemical-resistant clothing.

Engineering Control: Local exhaust ventilation recommended

Hygiene: Wash hands after use. No eating, drinking, or smoking during handling.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear, colourless Liquid.
Colour	Colourless, but may be dyed red or blue depending on customer preference.
Odour	Mild, characteristic.
pH @20°C	7 - 8.5
Freeze point.	- 12.9 °C
Initial boiling point and range	184°C
Flash point	>104-106°C (Closed Cup)
Relative density @ 20°C	1.100 - 1.120
Solubility	Miscible with water
Auto-ignition temperature	371°C
Viscosity @ 25°C	50-60 mPa·s

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

Stable at normal temperatures and use conditions

10.3. Possibility of hazardous reactions

None expected under normal conditions; not self-reactive

10.4. Conditions to avoid

Excessive heat, strong oxidisers

10.5. Incompatible materials

Incompatible with strong oxidisers, strong acids, and nitrates.

10.6. Hazardous decomposition products

Decomposition may produce CO, CO_2, aldehydes and organic acids.

SECTION 11: Toxicological information

11.1. Information on toxicological effects Acute toxicity

Acute Toxicity (oral): Harmful if swallowed

Ethylene glycol LD_{50} oral (rat): 6,140 mg/kg.

Skin/eye irritation: Not classified; may cause mild irritation.

STOT RE: Ethylene glycol may cause kidney damage after repeated exposure.

Reproductive toxicity: Contains Repr. 2 substance (H361d).

Aspiration hazard: Not classified.

SECTION 12: Ecological information

12.1. Toxicity Acute aquatic toxicity

Toxicity: Harmful to aquatic life with long lasting effects.

Ethylene glycol: low to moderate toxicity to aquatic life.

Benzotriazole derivative: chronic aquatic hazard.

12.2 Persistence and degradability

Ethylene glycol is readily biodegradable.

12.3 Bioaccumulative potential

Low bioaccumulation expected.

12.4 Mobility in soil

High mobility due to water solubility.

12.5 PBT/vPvB

Not PBT/vPvB.

SECTION 13: Disposal considerations

13.1. Waste Treatment

Disposal methods	Do not discharge to drains or watercourses. Classified as hazardous waste if contaminated. Dispose of waste via licensed waste contractor in accordance with local and national regulations.
Waste class	Waste code (EWC): To be assigned by the user in accordance with local authority guidance.

SECTION 14: Transport

General: Not classified as dangerous goods under(ADR/RID/IMDG/IATA)

14.1. UN number: Not Applicable

14.2. UN proper shipping name : Not Applicable

14.3. Transport hazard class(es): None

14.4. Packing group: Not Applicable

14.5. Environmental hazards: Not a Marine Pollutant

14.6. Transport in bulk: Not Applicable

SECTION 15: Regulatory information

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

Complies with UK-CLP and UK-REACH.

Contains a Repr. 2 substance: restricted to professional users.

Training required: Personnel must be trained in handling reproductive toxicants.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out for this mixture.

SECTION 16: Other information

General information	Follow label warnings; empty containers may retain residues. Labels should not be removed from containers until they have been cleaned and no product remains.
Revision comments	Initial release
Issued by	Compliance department
Revision date	03/12/2025
Revision	1.0
Supercedes date	
SDS Status	Approved
Hazard statements	H302 H361d H373 H412
Abbreviations	CLP: Classification, Labelling and Packaging Regulation REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals WEL: Workplace Exposure Limit PBT/vPvB Persistent, Bioaccumulative and Toxic / very Persistent, very Bioaccumulative