SAFETY DATA SHEET

MEG 30/70 Antifreeze Coolant (Heating & Refrigeration Grade)

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

1.1 Product identifier

Trade name: MEG 30/70 Antifreeze Coolant (Heating & Refrigeration Grade)

Product type: Monoethylene glycol/water heat transfer fluid (30/70 premix)

Product code: MEG30/70-HVAC

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;
antifreeze for chillers, solar heating, and refrigeration plants where uninhibited glycols are acceptable.

Uses advised against:
Use in open systems where vapours may be released; potable water or direct food contact;
automotive engine coolant; systems requiring corrosion inhibited heat transfer fluids.

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
+44 (0)1244 506 860 (General Enquiries)+
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):

Classified as hazardous due to the presence of 30% Monoethylene glycol

Hazard Class	Category	Hazard Statement
Acute Toxicity (Oral)	Category 4	H302 – Acute Tox. 4 (Oral) Harmful if swallowed
STOT – Repeated Exposure (Oral) or repeated exposure	Category 2	H373 – (STOT RE 2) May cause damage to organs (kidneys) through repeated exposure

2.2 Labelling according to Regulation (EC) No. 1272/2008

GHS07 GHS08

Signal word: Warning

Hazard statements:
H302 Harmful if swallowed.
H373 May cause damage to organs (kidneys) through prolonged or repeated exposure.

Precautionary statements:
P264 Wash … thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P301+P312 IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
P314 Get medical advice/attention if you feel unwell.
P330 Rinse mouth.
P501 Dispose of contents/container in accordance with local/regional regulations.

2.3 Other hazards:
Does not contain any PBT or vPvB substances. Not listed as an endocrine-disrupting substance under EU/UK REACH criteria.

SECTION 3: Composition/information on ingredients

Substance	CAS No	EC No	% w/w	Classification (Reg. 1272/2008
Monoethylene Glycol	107-21-1	203-473-3	30	Acute Tox. 4 (H302), STOT RE 2 (H373)
Deionised Water	7732-18-5	231-791-2	70	Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Seek medical advice if symptoms persist..
Inhalation	Unlikely under normal use. Move to fresh air; seek medical attention if symptoms occur.
Ingestion	Rinse mouth. DO NOT induce vomiting. Give water. Seek medical attention immediately, ethylene glycol ingestion may cause serious systemic effects.
Skin contact	Wash with soap and water. Remove contaminated clothing. Seek medical attention if irritation develops.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses if easy. Obtain medical attention if irritation persists.

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

Ingestion may lead to systemic toxicity affecting kidneys and central nervous system.

Symptoms may be delayed for several hours.

Mild irritation to skin/eyes with prolonged exposure.

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

Treat symptomatically. Ethanol or fomepizole may be used by medical professionals as antidotes.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:	Water spray, alcohol-resistant foam, dry chemical, or CO^2.
Unsuitable media:	Direct water jet (may spread fire).

5.2. Specific hazards arising from the substance or mixture

Specific Hazards	Combustible at elevated temperatures. Combustion may produce carbon monoxide, carbon dioxide, 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. Provide adequate ventilation.Spills may create slip hazard.

6.2. Environmental precautions

Environmental Precautions	Do not discharge to drains, watercourses, or soil. Contain spill to prevent environmental contamination.

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	Use only in closed or well-ventilated systems to avoid the formation of vapours or mists. Avoid contact with skin and eyes. Prevent spills and leakage; spilled product may create a slip hazard. Do not eat, drink, or smoke while handling the product. Ensure systems do not contain galvanised components unless compatibility with uninhibited glycol has been confirmed (risk of zinc dissolution). Handle in accordance with good industrial hygiene and safety practices.
7.2. Conditions for safe storage Storage precautions	Store in the original container, tightly closed when not in use. Keep in a cool, dry, well-ventilated area, ideally between 0–40 °C. Protect from frost, direct sunlight, and sources of heat or ignition.
7.3. Incompatible Materials	Do not store near strong oxidising agents, strong acids/bases, or galvanised metals. Keep containers upright to prevent leakage.
7.4. Specific End Use	This product is intended for use as a heat-transfer fluid for closed-loop heating, cooling, refrigeration, and HVAC systems. It is not recommended for: open systems where vapours may be released, potable water systems, automotive engine cooling, applications requiring corrosion-inhibited fluids unless a suitable inhibitor package is added.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters Occupational exposure limits

Workplace Exposure Limit (WEL):	Monoethylene Glycol (Vapour): 20 ppm (52 mg/m³) TWA, Vapour: 40 ppm (104 mg/m³) STEL (UK HSE EH40). Sk: Risk of absorption through skin

8.2. Exposure controls

Respiratory Protection	Not required under normal conditions; use A2/P2 respirator if vapour formation likely. Nitrile or butyl rubber gloves (EN 374).
Hand Protection	
Eye Protection	Safety goggles (EN 166).
Body Protection	Overalls or chemical-resistant clothing.
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	Liquid.
Colour	Colourless, but may be dyed red or blue depending on customer preference.
Odour	Mild, characteristic.
pH @20°C	6.0 - 8.0.
Melting point	approx. −34 °C
Initial boiling point and range	104°C
Flash point	>111°C (Closed Cup)
Relative density @ 20°C	1.07-1.10.
Solubility	Completely miscible with water
Auto-ignition temperature	398°C
Viscosity @ 25°C	5-7 mPa·s

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal use conditions.

10.2. Chemical stability

Stable under recommended handling and storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal use. No hazardous polymerisation.

10.4. Conditions to avoid

Conditions to avoid	Excessive heat, ignition sources, strong oxidisers.

10.5. Incompatible materials

Materials to avoid	Oxidising agents, strong acids/bases, galvanised steel.

10.6. Hazardous decomposition products

Hazardous decomposition	Carbon monoxide, carbon dioxide, organic vapours when heated to decomposition.

SECTION 11: Toxicological information

Mixture toxicity calculated based on component data in accordance with CLP Annex I

11.1. Information on toxicological effects Acute toxicity - oral

Acute toxicity (oral): Harmful if swallowed

LD_{50} (oral rat, MEG)	4,700 mg/kg
Skin corrosion/irritation	Not classified. Prolonged or repeated contact may cause mild irritation.
Serious eye damage/irritation	Not classified. May cause temporary eye irritation.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	repeated exposure: Category 2 (kidneys)

Genotoxicity / carcinogenicity

No evidence of mutagenic or carcinogenic effects.

Aspiration Hazard

Not Classified.

SECTION 12: Ecological information

12.1. Toxicity Acute aquatic toxicity	Low acute toxicity to aquatic life.
12.2. Persistence and degradability Persistence and degradability:	Readily biodegradable (based on data for MEG).
12.3. Bioaccumulative potential	Low (log $K_ow \approx -1.3$).
12.4. Mobility in soil	High
12.5. Results of PBT and vPvB assessment	Not applicable
12.6 Endocrine disrupting properties	Contains no substances identified as endocrine disruptors.

SECTION 13: Disposal considerations

13.1. Waste Treatment Methods

Disposal methods	Dispose of waste in accordance with local/regional regulations. Do not discharge to drains or watercourses. Empty containers may contain residues, rinse before recycling or disposal.
Waste class	Waste code (EWC): To be assigned by the user in accordance with local authority guidance.

SECTION 14: Transport information

General	Not classified as dangerous (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 classified as 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

UK Reach	Components Compliant
CLP	Regulation (EC) No 1272/2008: See Section 2
15.2. Chemical safety assessment	Not required for this mixture. No substances present above 0.1% listed on the UK REACH Candidate List (SVHC) No specific restrictions under Reach Annex XVII

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
Revision comments	Approved
Issued by	Compliance department
Revision date	03/12/2025
Revision	2
Supercedes date	
SDS Status	Approved
Key hazard statements	H302 Harmful if swallowed. H373 May cause damage to organs (kidneys) through prolonged or repeated exposure.
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