SAFETY DATA SHEET

Coolflow DTX 28%

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

1.1. Product identifier

Trade name	Coolflow DTX 28%
Product no.	CFDTX-10-28%

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

▼Relevant identified uses of the substance or mixture	Detoxified Ethylene Glycol based heat transfer fluid and antifreeze Restricted to professional and industrial use.

Use descriptors (REACH)

Product category	Description
PC 16	Heat Transfer Fluids
PC 4	Anti-Freeze and De-icing products

Process category	Description
PROC 20	Heat and pressure transfer fluids in dispersive, professional use but closed systems

Uses advised against	This product is not recommended for usages other than described above.

1.3. Details of the supplier of the safety data sheet

Company and address	**Hydratech, Division of Liquitherm Technologies Group Ltd** Europa Way, Swansea West Business Park, SA5 4AJ Fforestfach, Swansea United Kingdom Tel: +44 (0) 1792 586800 www.hydratech.co.uk
E-mail	info@hydratech.co.uk
Revision	18/03/2026
SDS Version	1.0
Date of previous version	30/09/2025 (1.0)

1.4. Emergency telephone number

Healthcare professionals: Dial 0344 892 0111 to reach The National Poisons Information Service (NPIS) (24 hour service)
General public:
England - Dial 111 to reach NHS 111 (24 hour service)
Scotland - Dial 111 to reach NHS 24 (24 hour service)
Wales - Dial 111 or 0845 4647 to reach NHS Direct (24 hour service)
See section 4 “First aid measures”.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.2. Label elements

In accordance with Article 9 and Article 12 of Regulation (EC) No. 1272/2008 (CLP), this mixture has been assessed by Toxikon Inc. as a mixture in which adequate and reliable scientific information demonstrates the occurrence of synergistic and antagonistic effects that make the mixture not classified as hazardous (or Dangerous) for acute toxicity, as determined by an EPA-certified laboratory, with an LD50 (oral, rat) >15,000 mg/kg body weight.

Hazard pictogram(s)	Not applicable.
Signal word	Not applicable.
Hazard statement(s)	Not applicable.
Precautionary statement(s)	
General	Not applicable.
Prevention	Not applicable.
Response	Not applicable.
Storage	Not applicable.
Disposal	Not applicable.
Hazardous substances	ethanediol;ethylene glycol
Additional labelling	The product contains a biocidal product.

2.3. Other hazards

Additional warnings	This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification. This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
ethanediol;ethylene glycol	CAS No.: 107-21-1 EC No.: 203-473-3 UK-REACH: Index No.: 603-027-00-1	15-25%	Acute Tox. 4, H302 STOT RE 2, H373	[1]

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

The classification listed for ethylene glycol above is that which is listed, according to Regulation (EC) No. 1272/2008 (CLP) for neat monoethylene glycol. However, the ethylene glycol present in this mixture is rendered non toxic (as determined by an EPA certified laboratory) upon the addition of Hydratech's patented DeToX™ additive.
More detailed information on the detoxification of monoethylene glycol can be found under "further classification and composition comments" in Section 16 of this Safety Data Sheet.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.
Inhalation	Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.
Skin contact	Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.
Eye contact	If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.
Ingestion	If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.
Burns	Not applicable.

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

None known.

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

Treat symptomatically.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:
Carbon oxides (CO / CO2)

5.3. Advice for firefighters

No specific requirements.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas.
Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.
Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 “Disposal considerations” on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact during pregnancy and while nursing.
Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. ▼Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material	Keep only in original packaging.
▼Storage conditions	0 - 40°C Dry, cool and well ventilated Protect from sunlight.
Incompatible materials	Bases Reducing agents Strong acids Strong oxidizing agents

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethanediol;ethylene glycol
Long term exposure limit (8 hours) (ppm): 20(vapour)
Long term exposure limit (8 hours) (mg/m^3): 10(particulate)/52(vapour)
Short term exposure limit (15 minutes) (ppm): 40 (vapour)

Short term exposure limit (15 minutes) (mg/m³): 104 (vapour)
Annotations:
Sk = Can be absorbed through the skin and lead to systemic toxicity.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

ethanediol;ethylene glycol

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	53 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	106 mg/kg bw/day
Long term – Local effects - General population	Inhalation	7 mg/m³
Long term – Local effects - Workers	Inhalation	35 mg/m³

PNEC

ethanediol;ethylene glycol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		10 mg/L
Freshwater sediment		37 mg/kg
Intermittent release (freshwater)		10 mg/L
Intermittent release (marine water)		10 mg/L
Marine water		1 mg/L
Marine water sediment		3.7 mg/kg
Sewage treatment plant		199.5 mg/L
Soil		1.53 mg/kg

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations	Smoking, drinking and consumption of food is not allowed in the work area.
Exposure scenarios	There are no exposure scenarios implemented for this product.
Exposure limits	Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.
Appropriate technical measures	The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Apply standard precautions during use of the product. Avoid inhalation of vapours.
Hygiene measures	In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure: No specific requirements.

Individual protection measures, such as personal protective equipment

Generally: Use only UKCA marked protective equipment.

Respiratory Equipment

Type	Class	Colour	Standards
No special when used as intended.			

Skin protection

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn. Wear a protective suit in the event of prolonged periods of work with the product.	-	-	

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Butyl	0,3	> 120	EN374-2, EN16523-1, EN388	
Vinyl/PVC	-	> 120	EN16523-1, EN388	
Nitrile	0,2	> 120	EN374-2, EN16523-1, EN388	

Eye protection

Type	Standards	
Safety glasses with side shields.	EN166	

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	Colourless (unless dyed according to customer specification)
Odour / Odour threshold	Sweet
pH	7.5-9.0
Density (g/cm^3)	1.015-1.045 (20 °C)
▼Relative density	1.015-1.045 (20 °C)

Kinematic viscosity	1.38 mm^2/s (40 °C)
Particle characteristics	Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C)	-15
Softening point/range (°C)	Does not apply to liquids.
Boiling point (°C)	103
Vapour pressure	No data available
Relative vapour density	No data available
Decomposition temperature (°C)	No data available

Data on fire and explosion hazards

Flash point (°C)	Not applicable
Flammability (°C)	Not applicable
Auto-ignition temperature (°C)	No data available
Lower and upper explosion limit (% v/v)	No data available.

Solubility

Solubility in water	Completely soluble
n-octanol/water coefficient (LogKow)	No data available.
Solubility in fat (g/L)	No data available.

9.2. Other information

Evaporation rate (n-butylacetate = 100)	No data available
Other physical and chemical parameters	No data available.
Oxidizing properties	Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
The product is stable under the conditions, noted in section 7 “Handling and storage”.

10.3. Possibility of hazardous reactions
None known.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
Bases
Reducing agents

Strong acids
Strong oxidizing agents

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

▼Acute toxicity

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

▼Skin corrosion/irritation

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

▼Serious eye damage/irritation

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

▼Respiratory sensitisation

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

▼Skin sensitisation

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

▼Germ cell mutagenicity

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

▼Carcinogenicity

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

▼Reproductive toxicity

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

▼STOT-single exposure

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

▼STOT-repeated exposure

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

▼Aspiration hazard

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

▼Symptoms related to the physical, chemical and toxicological characteristics

None known.

11.2. Information on other hazards

Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

None known.

SECTION 12: Ecological information

12.1. ▼Toxicity

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

12.2. ▼Persistence and degradability

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

12.3. ▼Bioaccumulative potential

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

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product is not covered by regulations on dangerous waste.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code	16 01 15 Antifreeze fluids other than those mentioned in 16 01 14

Contaminated packing

EWC code	16 01 15 Antifreeze fluids other than those mentioned in 16 01 14

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR/ADN/RID	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group
** Environmental hazards

▼Additional information

Not dangerous goods according to ADR/ADN/RID, IATA and IMDG.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application	Restricted to professional users. Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.
Demands for specific education	No specific requirements.
SEVESO - Categories / dangerous substances	Not applicable.
Additional information	Not applicable.
Sources	The Health and Safety at Work etc. Act 1974 Regulations 2013. In accordance with Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products as retained and amended in UK law. Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law. Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law. Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H302, Harmful if swallowed.
H373, May cause damage to organs through prolonged or repeated exposure.

The full text of identified uses as mentioned in section 1

PROC 20 = Heat and pressure transfer fluids in dispersive, professional use but closed systems
PC 16 = Heat Transfer Fluids
PC 4 = Anti-Freeze and De-icing products

▼Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EC = Effective concentration
ED = Effective dose
EINECS = European Inventory of Existing Commercial chemical Substances
EL = Effective Loading
ErC = Concentration associated with x% growth rate response

ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GWP = Global warming potential
HP = Hazardous Property code
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IC = X maximum inhibitory concentration
IMDG = International Maritime Dangerous Goods
LC = Lethal concentration
LCLo = Value is the lowest concentration of a material in air reported to have caused the death of animals or humans
LD = Lethal dose
LOAEC = Lowest Observed Adverse Effect Concentration
LOAEL = Lowest Observed Adverse Effect Level
LOEC = Lowest Observed Effect Concentration
LogKow = logarithm of the n-octanol/water coefficient
LL = Lethal Loading
M = For multiplication factor
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NOAEC = No Observed Adverse Effect Concentration
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
NOELR = No Observable Effect Loading Rate
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

▼ Additional information

As an individual chemical compound, Ethylene Glycol (aka Mono Ethylene Glycol) is classified as Acute Tox. 4 - H302 and STOT RE 2 - H373, according to Regulation (EC) No. 1272/2008 and information provided in the REACH registration of this substance.

However, it should be noted that Ethylene Glycol is not independently toxic. Specifically, the above classifications arise from the fact that, upon its metabolization in the liver by the enzyme Alcohol Dehydrogenase (ADH), Ethylene Glycol is ultimately converted into Glycolic Acid and Oxalic Acid. These acids are responsible for the common symptoms often observed in cases of Ethylene Glycol poisoning, including Metabolic Acidosis. Additionally, the Oxalic Acid produced will bind to Serum Calcium in the blood to form Calcium Oxalate Crystals that deposit in the kidneys, causing acute kidney (renal) failure. It has been utilised as a patented method of inhibiting the metabolization of Ethylene Glycol in the liver, through the addition of a detoxifier additive.

This additive has been scientifically proven, by an EPA approved laboratory, to inhibit the formation of Glycolic Acid

and Oxalic Acid, preventing Ethylene Glycol poisoning, including the deposition of Calcium Oxalate crystals in the kidneys. The test studies by Toxicon, Inc. determined that by the occurrence of synergistic and antagonistic effects the addition of the additive to Ethylene Glycol detoxifies it, resulting in a mixture with an LD50 , Oral, Rat >15,000 mg/kg bw. By raising the LD50 to a level outside of classification as acutely toxic and preventing the targeting of the kidney by Calcium Oxalate Crystals, this mixture does not fall within the limits for classification as hazardous, as either Acute Tox. 4 - H302 or STOT RE 2 – H373.

The safety data sheet is validated by

Dylan Redwood (Liquitherm Technologies Group)

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
Country-language: GB-en