

SAFETY DATA SHEET
MONOETHYLENE GLYCOL TECH

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product name	MONOETHYLENE GLYCOL TECH
Product number	2588
REACH registration number	01-2119456816-28-0000
CAS number	107-21-1
EU index number	603-027-00-1
EC number	203-473-3

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

Identified uses	Laboratory reagent. Antifreeze liquid.
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet**Supplier**

Reagent Chemical Services
18 Aston Fields Road
Whitehouse Industrial Estate
Runcorn
Cheshire WA7 3DL

T: 01928 716903 (08.30 - 17.00)
F: 01928 716425
E: info@reagent.co.uk

1.4. Emergency telephone number

Emergency telephone	OHES Environmental Ltd 24-7 Tel. 0333 333 9939 (24 hour)
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SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification (EC 1272/2008)**

Physical hazards	Not Classified
Health hazards	Acute Tox. 4 - H302 STOT RE 2 - H373
Environmental hazards	Not Classified

2.2. Label elements

EC number	203-473-3
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MONOETHYLENE GLYCOL TECH

Pictogram



Signal word

Warning

Hazard statements

H302 Harmful if swallowed.

H373 May cause damage to organs (Kidneys) through prolonged or repeated exposure.

Precautionary statements

P260 Do not breathe vapour/ spray.

P264 Wash contaminated skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

P314 Get medical advice/ attention if you feel unwell.

P501 Dispose of contents/ container in accordance with national regulations.

Supplementary precautionary statements

P330 Rinse mouth.

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	MONOETHYLENE GLYCOL TECH
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SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Show this Safety Data Sheet to the medical personnel. Get medical attention immediately.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
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Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
Skin contact	Prolonged contact may cause dryness of the skin.
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.
Specific treatments	No specific chemical antidote is known to be required after exposure to this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire. 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	The product is not flammable.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO ₂). Carbon monoxide (CO).

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Control run-off water by containing and keeping it out of sewers and watercourses.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage.
For emergency responders	Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Wear protective clothing as described in Section 8 of this safety data sheet. Small Spillages: Wipe up with an absorbent cloth and dispose of waste safely. Large Spillages: Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Wash thoroughly after dealing with a spillage.
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6.4. Reference to other sections

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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 Wear protective clothing as described in Section 8 of this safety data sheet. Do not eat, drink or smoke when using this product. Avoid inhalation of vapours and spray/mists. Keep away from food, drink and animal feeding stuffs.

Advice on general occupational hygiene Good personal hygiene procedures should be implemented. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep container tightly closed, in a cool, well ventilated place. Keep away from food, drink and animal feeding stuffs. Protect from freezing and direct sunlight. Store away from the following materials: Acids. Alkalis. Oxidising materials.

Storage class Chemical storage.

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

Long-term exposure limit (8-hour TWA): WEL 52 mg/m³(Sk)

Short-term exposure limit (15-minute): WEL 104 mg/m³(Sk)

WEL = Workplace Exposure Limit

DNEL Workers - Inhalation; Long term local effects: 35 mg/m³
 Workers - Dermal; Long term systemic effects: 106 mg/kg/day
 General population - Inhalation; Long term local effects: 7 mg/m³
 General population - Dermal; Long term systemic effects: 53 mg/kg/day

PNEC - Fresh water; 10 mg/l
 - Marine water; 1 mg/l
 - Intermittent release; 10 mg/l
 - STP; 199.5 mg/l
 - Sediment (Freshwater); 37 mg/kg
 - Sediment (Marinewater); 3.7 mg/kg
 - Soil; 1.53 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Avoid inhalation of vapours and spray/mists.

Eye/face protection

Wear chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

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Hand protection	Wear protective gloves. To protect hands from chemicals, gloves should comply with European Standard EN374. 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. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. For exposure up to 8 hours, wear gloves made of the following material: Neoprene. Nitrile rubber. Polyvinyl chloride (PVC). Thickness: ~ 0.4 mm Frequent changes are recommended.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.
Hygiene measures	Provide eyewash station and safety shower. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Warn cleaning personnel of any hazardous properties of the product.
Respiratory protection	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Check that the respirator fits tightly and the filter is changed regularly. Wear a respirator fitted with the following cartridge: Organic vapour filter. Gas and combination filter cartridges should comply with European Standard EN14387. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. Check that the respirator fits tightly and the filter is changed regularly.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid.
Colour	Colourless.
Odour	Almost odourless.
pH	pH (diluted solution): 6 - 8 10%
Melting point	- 12°C
Initial boiling point and range	197°C
Flash point	118°C
Evaporation rate	No information available.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 3.2 Upper flammable/explosive limit: 15.3
Vapour pressure	1 mm Hg @ °C
Vapour density	2.14
Relative density	1.11 @ °C
Solubility(ies)	Miscible with water.
Partition coefficient	log Kow: -1.36
Auto-ignition temperature	410°C
Viscosity	No information available.
Explosive properties	Not considered to be explosive.

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Oxidising properties Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

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 No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Acute Tox. 4 - H302 Harmful if swallowed.

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 3,500.0

Species Mouse

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

ATE dermal (mg/kg) 3,500.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

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

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

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Skin sensitisation	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.
Target organs	Kidneys
<u>Aspiration hazard</u>	
Aspiration hazard	Based on available data the classification criteria are not met.
<u>General information</u>	
	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	May cause temporary eye irritation.
Route of entry	Ingestion Inhalation Skin and/or eye contact
Target organs	No specific target organs known.

SECTION 12: Ecological Information

Ecotoxicity Not regarded as dangerous for the environment.

12.1. Toxicity

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

Acute toxicity - fish LC₅₀, 96 hours: 18,500 (Onchorynchus mykiss) mg/l, Algae

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 46,300 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC₅₀, 72 hours: 10,000 (S.quadricauda) mg/l, Fish

Chronic toxicity - fish early life stage , 30 days: 2629 (Calculated) mg/l,

Chronic toxicity - aquatic invertebrates , 16 days: 690 (Calculated) mg/l, Daphnia magna

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12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Kow: -1.36

12.4. Mobility in soil

Mobility The product is water-soluble and may spread in water systems. The product is non-volatile.

Adsorption/desorption coefficient Water - : koc = 1 @ °C

Henry's law constant 0.133 Pa m³/mol @ 25°C

12.5. Results of PBT and vPvB assessment

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.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible.

Disposal methods Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Dispose of waste product or used containers in accordance with local regulations

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.

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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

National regulations	Health and Safety at Work etc. Act 1974 (as amended). Control of Substances Hazardous to Health Regulations 2002 (as amended).
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.
Authorisations (Title VII Regulation 1907/2006)	No specific authorisations are known for this product.
Restrictions (Title VIII Regulation 1907/2006)	No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

SECTION 16: Other information

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. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. IATA: International Air Transport Association. ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods. CAS: Chemical Abstracts Service. LC ₅₀ : Lethal Concentration to 50 % of a test population. LD ₅₀ : Lethal Dose to 50% of a test population (Median Lethal Dose). EC ₅₀ : 50% of maximal Effective Concentration. PBT: Persistent, Bioaccumulative and Toxic substance. vPvB: Very Persistent and Very Bioaccumulative. DNEL: Derived No Effect Level. PNEC: Predicted No Effect Concentration.
Classification abbreviations and acronyms	Acute Tox. = Acute toxicity STOT RE = Specific target organ toxicity-repeated exposure
General information	Only trained personnel should use this material.

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Key literature references and sources for data	Source: European Chemicals Agency, http://echa.europa.eu/
Classification procedures according to Regulation (EC) 1272/2008	Acute Tox. 4 - H302: STOT RE 2 - H373: : Expert judgement.
Training advice	Read and follow manufacturer's recommendations.
Revision date	02/04/2018
Revision	4
Supersedes date	22/09/2017
SDS number	20805
SDS status	Approved.
Hazard statements in full	H302 Harmful if swallowed. H373 May cause damage to organs (Kidneys) through prolonged or repeated exposure.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.