



SAFETY DATA SHEET MEG Antifreeze

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

1.1. Product identifier

Product name	MEG Antifreeze
Product number	7860
Internal identification	GHS21801

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

Identified uses	Antifreeze liquid. Corrosion inhibitor.
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1.3. Details of the supplier of the safety data sheet

Supplier	Morris Lubricants Castle Foregate Shrewsbury SY1 2EL
	08.45 - 17.00 GMT T: (+44)(0)1743 232200 F: (+44)(0)1743 353584 sds@morris-lubricants.co.uk

1.4. Emergency telephone number

Emergency telephone	+44 (0)1743 232200 (08.45 - 17.00 hrs GMT)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

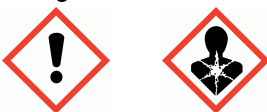
Classification

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

Classification (67/548/EEC or -
1999/45/EC)

2.2. Label elements

Pictogram



Signal word Warning

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

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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+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
	P314 Get medical advice/attention if you feel unwell.
	P330 Rinse mouth.
P501a Dispose of contents/container to hazardous or special waste collection point.	

Contains Ethane-1,2-diol

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Ethane-1,2-diol			60-100%
CAS number: 107-21-1	EC number: 203-473-3	REACH registration number: 01-2119456816-28-XXXX	

Classification	Classification (67/548/EEC or 1999/45/EC)
STOT RE 2 - H373	Xn;R22

Disodium tetraborate pentahydrate			1-5%
CAS number: 12179-04-3	EC number: 215-540-4	REACH registration number: 01-2119490790-32-XXXX	

Classification	Classification (67/548/EEC or 1999/45/EC)
Eye Irrit. 2 - H319 Repr. 1A - H360FD	Repr. Cat. 1;R60,R61.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention if any discomfort continues.
Inhalation	Remove affected person from source of contamination. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention.
Ingestion	Do not induce vomiting. Place unconscious person on their side in the recovery position and ensure breathing can take place. Rinse mouth thoroughly with water. Give plenty of water to drink. Give milk instead of water if readily available. Keep affected person under observation. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately. Show this Safety Data Sheet to the medical personnel. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

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

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

Notes for the doctor Treat symptomatically

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Stop flow of material to fire. Extinguish with the following media: Alcohol-resistant foam. Carbon dioxide (CO₂). Dry chemicals, sand, dolomite etc. Water spray, fog or mist.

5.2. Special hazards arising from the substance or mixture

Specific hazards Toxic gases or vapours. Heat from fire could result in drums bursting

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Use water to keep fire exposed containers cool and disperse vapours. Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Use air-supplied respirator, gloves and protective goggles.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions For personal protection, see Section 8. In case of spills, beware of slippery floors and surfaces.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Absorb in vermiculite, dry sand or earth and place into containers. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level. Avoid spilling, skin and eye contact.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry and cool place. Do not store near heat sources or expose to high temperatures.

Storage class Chemical storage.

7.3. Specific end use(s)

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ethane-1,2-diol

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Long-term exposure limit (8-hour TWA): WEL 20 ppm(Sk) 52 mg/m³(Sk)

Short-term exposure limit (15-minute): WEL 40 ppm(Sk) 104 mg/m³(Sk)

Sk

Disodium tetraborate pentahydrate

Long-term exposure limit (8-hour TWA): WEL 1 mg/m³

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

Ethane-1,2-diol (CAS: 107-21-1)

DNEL Industry - Inhalation; Long term local effects: 35 mg/m³
 Industry - Dermal; Long term systemic effects: 106 mg/kg
 Consumer - Inhalation; Long term local effects: 7 mg/m³
 Consumer - Dermal; Long term systemic effects: 53 mg/m³

PNEC - Fresh water; 10 mg/l
 - Marine water; 1 mg/l
 - STP; 199.5 mg/l
 - Sediment (Freshwater); 20.9 mg/kg
 - Soil; 1.53 mg/kg
 - Intermittent release; 10 mg/l

Disodium tetraborate pentahydrate (CAS: 12179-04-3)

DNEL Consumer - Oral; Short term systemic effects: 1.15 mg/kg/day
 Industry - Inhalation; Short term local effects: 17.04 mg/m³
 Industry - Inhalation; Long term local effects: 17.04 mg/m³
 Industry - Inhalation; Long term systemic effects: 9.8 mg/m³
 Consumer - Inhalation; Short term local effects: 17.04 mg/m³
 Consumer - Inhalation; Long term local effects: 17.04 mg/m³
 Consumer - Inhalation; Long term systemic effects: 4.9 mg/m³
 Industry - Dermal; Long term systemic effects: 458.2 mg/kg/day
 Consumer - Dermal; Long term systemic effects: 231.8 mg/kg/day

PNEC - Fresh water; 2.02 mg/l
 - Marine water; 2.02 mg/l
 - Intermittent release; 13.7 mg/l
 - Soil; 5.4 mg/kg
 - STP; 10 mg/l

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

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Hand protection	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.
Other skin and body protection	Use barrier creams to prevent skin contact.
Hygiene measures	Use engineering controls to reduce air contamination to permissible exposure level. Wash promptly with soap and water if skin becomes contaminated. Do not eat, drink or smoke when using this product.
Respiratory protection	No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Blue.
Odour	Odourless.
Melting point	<-12°C
Initial boiling point and range	165°C @ 760 mm Hg
Flash point	111°C PMCC (Pensky-Martens closed cup).
Upper/lower flammability or explosive limits	: 3.2
Vapour pressure	0.05 kPa @ °C
Vapour density	2.14
Relative density	1.13 @ 20°C
Solubility(ies)	Miscible with water. Miscible with the following materials: acetone Alcohols.
Auto-ignition temperature	400°C
Viscosity	21 cP @ 20°C

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Water, moisture.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents. Strong acids. Flammable/combustible materials.

10.6. Hazardous decomposition products

Hazardous decomposition products Oxides of carbon. Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m³.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 540.54054054

Ingestion Harmful if swallowed.

Skin contact May be absorbed through the skin. Skin irritation should not occur when used as recommended.

Eye contact May cause temporary eye irritation.

SECTION 12: Ecological Information

Ecotoxicity Not regarded as dangerous for the environment.

12.1. Toxicity

Toxicity Not considered toxic to fish.

Acute toxicity - fish LC₅₀, 96 hours: 22810 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 41000 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The product is expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating.

12.4. Mobility in soil

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

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods Avoid the spillage or runoff entering drains, sewers or watercourses. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Waste class European Waste Catalogue (EWC) code: 16 01 15* (other a/freeze)

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

Road transport notes Not classified.

Rail transport notes Not classified.

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Air transport notes Not classified.

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

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 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). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
EU legislation	Dangerous Preparations Directive 1999/45/EC. Dangerous Substances Directive 67/548/EEC.
Guidance	Workplace Exposure Limits EH40. Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment

SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	11/11/2015
Revision	1
SDS number	21801
Hazard statements in full	H302 Harmful if swallowed. H319 Causes serious eye irritation. H360FD May damage fertility. May damage the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

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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.