



SAFETY DATA SHEET

ANTIFREEZE 1

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

1.1. Product identifier

Product name	ANTIFREEZE 1
Product number	10288
Synonyms; trade names	ANTIFREEZE BS6580,ANTIFREEZE BS6580 BLUE,ANTIFREEZE BS6580 CLEAR,ANTIFREEZE BS6580: 92 BLUE,BS6580 FL GREEN,A/FREEZE UNIVERSAL GEC3205C,UNIVAR ANTIFREEZE,MULTIPART BBU9437

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

Identified uses	Antifreeze liquid. Antifreeze for vehicles,
-----------------	---

1.3. Details of the supplier of the safety data sheet

Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 sds@univar.com +44 1274 267306
----------	--

1.4. Emergency telephone number

Emergency Contact Number (Outside Office Hours)	SGS - +32 (0)3 575 55 55 (24h)
Emergency Contact Number (Office Hours)	+44 1274 267346
Sds No.	10288

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards	Not Classified
Health hazards	Acute Tox. 4 - H302 Repr. 2 - H361d STOT RE 2 - H373
Environmental hazards	Not Classified

Classification (67/548/EEC or 1999/45/EC) Xn; R48/22, R22. Repr. Cat. 3 R63

2.2. Label elements

ANTIFREEZE 1

Pictogram



Signal word

Warning

Hazard statements

H361d Suspected of damaging the unborn child.
 H373 May cause damage to organs through prolonged or repeated exposure if swallowed.
 H302 Harmful if swallowed.

Precautionary statements

P260 Do not breathe vapour/spray.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P330 Rinse mouth.
 P501 Dispose of contents/container in accordance with national regulations.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Contains

ETHANEDIOL, 2-Ethylhexanoic Acid, Potassium Salt

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ETHANEDIOL		60-100%
CAS number: 107-21-1	EC number: 203-473-3	REACH registration number: 01-2119456816-28
Classification Acute Tox. 4 - H302 STOT RE 2 - H373	Classification (67/548/EEC or 1999/45/EC) Xn; R48/22, R22	
2-Ethylhexanoic Acid, Potassium Salt		1-5%
CAS number: 3164-85-0	EC number: 221-625-7	
Classification Repr. 2 - H361d	Classification (67/548/EEC or 1999/45/EC) Repr. Cat. 3 R63	

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

Inhalation

Move affected person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention immediately.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.

ANTIFREEZE 1

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

Inhalation Vapours in high concentrations are anaesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression.

Ingestion Ingestion of large amounts may cause unconsciousness.

Skin contact Prolonged skin contact may cause redness and irritation.

Eye contact May cause temporary eye irritation.

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

Notes for the doctor If several ounces (60 - 100 ml) of ethylene glycol have been ingested, early administration of ethanol may counter the toxic effects (metabolic acidosis, renal damage). Consider hemodialysis or peritoneal dialysis & thiamine 100 mg plus pyridoxine 50 mg intravenously every 6 hours. If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion. Consult standard literature for details of treatment. 4-Methyl pyrazole (Antizol®) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol (EG), di- or triethylene glycol (DEG, TEG), ethylene glycol butyl ether (EGBE), or methanol intoxication if available. Fomepizole protocol: loading dose 15 mg/kg intravenously, follow by bolus dose of 10 mg/kg every 12 hours; after 48 hours, increase bolus dose to 15 mg/kg every 12 hours. Continue fomepizole until serum methanol, EG, DEG, TEG or EGBE are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late stage cranial nerve involvement. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. In severe poisoning, respiratory support with mechanical ventilation and positive end expiratory pressure may be required. Maintain adequate ventilation and oxygenation of the patient. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. If burn is present, treat as any thermal burn, after decontamination. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

5.2. Special hazards arising from the substance or mixture

Specific hazards Oxides of the following substances: Carbon. Ketones. Aldehydes.

Hazardous combustion products Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Contain and collect extinguishing water.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

ANTIFREEZE 1

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of spray mist and contact with skin and eyes. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Provide adequate ventilation. Avoid inhalation of vapours and spray/mists.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

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

ETHANEDIOL

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ particulate
Sk

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

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

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

Ingredient comments WEL = Workplace Exposure Limits

ETHANEDIOL (CAS: 107-21-1)

Ingredient comments WEL = Workplace Exposure Limits

DNEL

Industry - Inhalation; Short term : 35 mg/m³

Industry - Dermal; Long term : 106 mg/kg/day

Consumer - Dermal; Long term : 53 mg/kg/day

Consumer - Inhalation; Long term : 7 mg/m³

ANTIFREEZE 1

PNEC

- Fresh water; 10 mg/l
- Marine water; 1 mg/l
- Soil; 1.53 mg/l
- STP; 199.5 mg/l

METHYL 1H BENZOTRIAZOLE (CAS: 29385-43-1)

Ingredient comments

No exposure limits known for ingredient(s).

DENATONIUM BENZOATE (CAS: 3734-33-6)

Ingredient comments

No exposure limits known for ingredient(s).

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

The following protection should be worn: Chemical splash goggles.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. 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. Butyl rubber. Polyvinyl chloride (PVC). EN 374

Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

Provide eyewash station and safety shower. Wash contaminated clothing before reuse. Wash promptly with soap and water if skin becomes contaminated. Eating, smoking and water fountains prohibited in immediate work area.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P3.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Various colours.
Odour	Mild.
Odour threshold	Data lacking.
pH	pH (diluted solution): 7 - 9 @ 33%
Melting point	<-18°C
Initial boiling point and range	> 160°C @
Flash point	> 120°C

ANTIFREEZE 1

Upper/lower flammability or explosive limits	Data lacking.
Vapour pressure	Data lacking. 2 mbar @ °C
Vapour density	Data lacking.
Relative density	1.12 @ @ 20 °C°C
Solubility(ies)	Soluble in water.
Partition coefficient	Not known.
Auto-ignition temperature	>200°C
Decomposition Temperature	Data lacking.
Viscosity	Data lacking.
Explosive properties	Data lacking.
Oxidising properties	Not available.

9.2. Other information

Other information	Not available.
-------------------	----------------

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	Will not polymerise.
------------------------------------	----------------------

10.4. Conditions to avoid

Conditions to avoid	Avoid excessive heat for prolonged periods of time.
---------------------	---

10.5. Incompatible materials

Materials to avoid	Strong oxidising agents. Strong acids. Strong alkalis. Strong reducing agents.
--------------------	--

10.6. Hazardous decomposition products

Hazardous decomposition products	Oxides of the following substances: Carbon. Aldehydes. Ketones.
----------------------------------	---

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects	No data available.
-----------------------	--------------------

Acute toxicity - oral

ATE oral (mg/kg)	555.56
------------------	--------

Inhalation	Vapour may irritate respiratory system/lungs. Vapours in high concentrations are anaesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression.
------------	---

ANTIFREEZE 1

Ingestion	Harmful if swallowed. May cause liver and/or renal damage.
Skin contact	Prolonged and frequent contact may cause redness and irritation.
Eye contact	May cause temporary eye irritation.
Acute and chronic health hazards	May cause liver and/or renal damage.
Target organs	Liver Kidneys

Toxicological information on ingredients.

ETHANEDIOL

Acute toxicity - oral

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 10,600.0

Species Rabbit

Notes (dermal LD₅₀) LD₅₀ > 10600 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 2.5

Species Rat

Notes (inhalation LC₅₀) LD₅₀ > 2.5 mg/l, Inhalation, Rat

ATE inhalation (vapours mg/l) 2.5

Skin corrosion/irritation

Animal data Data lacking.

Serious eye damage/irritation

Serious eye damage/irritation Data lacking.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vivo This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity There is no evidence that the product can cause cancer.

Reproductive toxicity

Reproductive toxicity - development Symptoms following overexposure may include the following: Possible risk of adverse reproductive effects.

Specific target organ toxicity - repeated exposure

ANTIFREEZE 1

STOT - repeated exposure May cause damage to organs (Kidneys) through prolonged or repeated exposure if swallowed.

Inhalation Vapour may irritate respiratory system/lungs.

Ingestion Harmful if swallowed. Lethal dose to humans 100ml

Skin contact Prolonged and frequent contact may cause redness and irritation.

Eye contact May cause temporary eye irritation.

Target organs Liver Kidneys

SECTION 12: Ecological Information

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity No information available.

Ecological information on ingredients.

ETHANEDIOL

Acute toxicity - fish LC50, 96 hours, 96 hours: 72860 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours, 48 hours: > 100 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 96 hours, 96 hours: 6500 - 13000 mg/l,

Acute toxicity - microorganisms EC₅₀, 30 min, 30 minutes: 225 mg/l, Activated sludge

12.2. Persistence and degradability

Persistence and degradability The product is expected to be biodegradable.

Ecological information on ingredients.

ETHANEDIOL

Persistence and degradability The substance is readily biodegradable.

Biodegradation - Degradation (%) 90%: > 10 days
OECD 301A

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not known.

Ecological information on ingredients.

ETHANEDIOL

Bioaccumulative potential The product is not bioaccumulating.

ANTIFREEZE 1

Partition coefficient -1.36

12.4. Mobility in soil

Mobility The product is soluble in water.

Ecological information on ingredients.

ETHANEDIOL

Mobility The product is soluble in water.

Adsorption/desorption coefficient Soil - Koc: 1 @ °C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

ETHANEDIOL

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.

Ecological information on ingredients.

ETHANEDIOL

Cod 1.22

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Do not puncture or incinerate, even when empty. 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. Empty Container Warning (where applicable): Empty containers may retain residue and can be dangerous. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

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

ANTIFREEZE 1

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

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 Not applicable.

**Annex II of MARPOL 73/78
and the IBC Code**

SECTION 15: Regulatory information

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

National regulations	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
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). Dangerous Preparations Directive 1999/45/EC. 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).
Guidance	Workplace Exposure Limits EH40. CHIP for everyone HSG228. Safety Data Sheets for Substances and Preparations. Approved Classification and Labelling Guide (Sixth edition) L131.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	15/06/2015
Revision	03
SDS number	10288
SDS status	Approved.
Signature	J Spenceley

ANTIFREEZE 1

Risk phrases in full

R22 Harmful if swallowed.

R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R63 Possible risk of harm to the unborn child.

Hazard statements in full

H302 Harmful if swallowed.

H361d Suspected of damaging the unborn child.

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

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

TURKISH SIGNATURE