

## SAFETY DATA SHEET

### Fluid Science Industrial Grade Antifreeze / Coolant

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

##### 1.1. Product identifier

Product name Fluid Science Industrial Grade Antifreeze / Coolant

Product number 0380

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

Identified uses Antifreeze / Coolant Liquid

##### 1.3. Details of the supplier of the safety data sheet

Supplier Fluid Science Limited  
Unit 5 Pride Point  
Ashcroft Road  
Knowsley Industrial Park  
Kirkby  
L33 7TW  
  
+44 (0)1244 506 860 (General Enquiries)+

Contact person sales@fluidscienceltd.com

##### 1.4. Emergency telephone number

Emergency telephone 0870 190 6777 (National Chemical Emergency Centre) +44 (0)1270 502891

#### 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

Hazard pictograms



Signal word Warning

Hazard statements	H302 Harmful if swallowed. H373 May cause damage to organs 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 CENTRE/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 regulations.
Contains	ETHANEDIOL

### 2.3. Other hazards

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

ETHANEDIOL		100.0%
CAS number: 107-21-1	EC number: 203-473-3	REACH registration number: 012119456816-28-xxxx
Classification Acute Tox. 4 - H302 STOT RE 2 - H373		

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	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. If breathing stops, provide artificial respiration. Never give anything by mouth to an unconscious person. Symptoms of poisoning may occur even after several hours; therefore medical observation is suggested for at least 48 hours after the accident.
Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion	DO NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
Skin contact	Remove contaminated clothing and rinse skin thoroughly with water.
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.

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

General information	No additional symptoms or effects are anticipated.
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### 4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor If swallowed, flush stomach, then activated charcoal (carbo medicalis) and sodium sulfate.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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

### 5.2. Special hazards arising from the substance or mixture

Specific hazards	Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ).
Hazardous combustion products	When heated, vapours/gases hazardous to health may be formed.

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

## **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.
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### 6.2. Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground. Avoid or minimise the creation of any environmental contamination.
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### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Absorb spillage with non-combustible, absorbent material. Flush away spillage with plenty of water.
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### 6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. For waste disposal, see section 13.
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## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Usage precautions	Avoid spilling. Avoid contact with skin and eyes. Avoid the formation of mists. Provide adequate ventilation.
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### 7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Keep separate from food, feedstuffs, fertilisers and other sensitive material. Store in closed original container at temperatures between 0°C and 40°C.
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Storage class	Miscellaneous hazardous material storage.
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### 7.3. Specific end use(s)

## **SECTION 8: Exposure controls/Personal protection**

### 8.1. Control parameters Occupational exposure limits

ETHANEDIOL

Long-term exposure limit (8-hour TWA): WEL 20 ppm 52 mg/m<sup>3</sup> vapour  
Short-term exposure limit (15-minute): WEL 40 ppm 104 mg/m<sup>3</sup> vapour  
Sk

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup> particulate  
Sk

WEL = Workplace Exposure Limit  
Sk = Can be absorbed through the skin.

DNEL	Industry - Dermal; Long term systemic effects: 106 mg/kg/day Industry - Inhalation; Long term local effects: 35 mg/m <sup>3</sup> Consumer - Dermal; Long term systemic effects: 53 mg/kg/day Consumer - Inhalation; Long term local effects: 7 mg/m <sup>3</sup>
PNEC	- Fresh water; 10 mg/l - marine water; 1 mg/l - Sediment (Freshwater); 20.9 mg/kg - Intermittent release; 10 mg/l - Soil; 1.53 mg/kg - STP; 199.5 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. Use explosion-proof general and local exhaust ventilation.
Eye/face protection	Wear chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Hand protection	It is recommended that chemical-resistant, impervious gloves are worn. Wear protective gloves made of the following material: Butyl rubber. Viton rubber (fluoro rubber). To protect hands from chemicals, gloves should comply with European Standard EN374. Frequent changes are recommended. It should be noted that liquid may penetrate the gloves.
Other skin and body protection	Use barrier creams to prevent skin contact. Provide eyewash station and safety shower. Wear appropriate clothing to prevent repeated or prolonged skin contact.
Hygiene measures	Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station and safety shower. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes wet or contaminated. Eating, smoking and water fountains prohibited in immediate work area. Do not smoke in work area.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. It is recommended to use respiratory equipment with combination filter, type A2/P2.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Blue.
Odour	Odourless.
pH	pH (diluted solution): 6 - 7.5 10
Melting point	<-12°C
Initial boiling point and range	165°C @ 760 mm Hg
Flash point	111°C
Vapour pressure	0.05 hPa @ 20°C

Relative density	1.13 @ 20°C
Solubility	Miscible with water, acetone, and alcohols.
Auto-ignition temperature	398°C
Viscosity	16.1 mPa s @ 25°C

9.2. Other information

**SECTION 10: Stability and reactivity**

10.1. Reactivity

Reactivity No information available.

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 Not available.

10.4. Conditions to avoid

Conditions to avoid Avoid contact with strong oxidising agents. Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products None at ambient temperatures. Thermal decomposition or combustion products may include products the following substances: Oxides of carbon.

**SECTION 11: Toxicological information**

11.1. Information on toxicological effects Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 7,712.0

Species Rat

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 3,500.0

Species Mouse

Acute toxicity - inhalation

Species Rat

Notes (inhalation LC<sub>50</sub>) Time: 6 hours.

Skin corrosion/irritation

Animal data Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Not irritating.

### Respiratory sensitisation

Respiratory sensitisation Guinea pig: Not sensitising.

### Skin sensitisation

Skin sensitisation - Guinea pig: Not sensitising.

### Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Genotoxicity - in vivo No information available.

### Carcinogenicity

Carcinogenicity No information available.

### Reproductive toxicity

Reproductive toxicity - fertility No information available.

Reproductive toxicity development No information available.

### Specific target organ toxicity - single

exposure STOT - single exposure Not available.

### Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not available.

Inhalation	Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis. Overexposure may depress the central nervous system, causing dizziness and intoxication.
Ingestion	Harmful if swallowed.
Skin contact	Repeated exposure may cause skin dryness or cracking.
Eye contact	Irritation of eyes and mucous membranes.
Acute and chronic health hazards	Prolonged or repeated exposure to vapours in high concentrations may cause the following adverse effects: Central and/or peripheral nervous system damage. Brain damage.
Route of exposure	Ingestion. Inhalation
Target organs	Brain Respiratory system, lungs Mucous membranes
Medical symptoms	Skin irritation. Irritation of eyes and mucous membranes. Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Headache. Fatigue. Nausea, vomiting.
Medical considerations	Skin disorders and allergies. Convulsions. Central nervous system depression. Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

## SECTION 12: Ecological information

### 12.1. Toxicity Acute aquatic toxicity

Acute toxicity - fish LC<sub>50</sub>, 96 hours: 72860 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC<sub>50</sub>, 48 hours: > 100 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC<sub>50</sub>, 96 hours: 6500-13000 mg/l,  
Pseudokirchneriella subcapitata.

Acute toxicity - EC20, 30 minutes: > 1995 mg/l, Activated sludge microorganisms

#### 12.2. Persistence and degradability

Persistence and degradability The product is readily biodegradable.

#### 12.3. Bioaccumulative potential

Bioaccumulative potential The product has low potential for bioaccumulation.

Partition coefficient : -1.36

#### 12.4. Mobility in soil 12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment No information available

#### 12.6. Other adverse effects

Other adverse effects Do not discharge product unmonitored into the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Disposal methods

Confirm disposal procedures with environmental engineer and local regulations. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Waste class

EWC NUMBER: Allocation of a waste code number in accordance with the European Waste Catalogue, should be carried out in agreement with an EA authorised waste disposal company.

### 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

applicab

le.

#### 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.

#### 14.7. Transport in bulk according to Annex II of MARPOL 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

EU legislation	Regulation (EC) No 1907/2006 REACH. Regulation (EC) No 1272/2008 CLP. Dangerous Substances Directive 67/548/EEC.
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#### 15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

### SECTION 16: Other information

General information	Since empty containers retain product residue, follow label warnings, even after container is emptied. For further Health and Safety information contact: Health and Safety Officer. Labels should not be removed from containers until they have been cleaned and no product remains within.
Revision comments	Updated company address.
Issued by	Compliance Department
Revision date	24/10/2018
Revision	8
Supersedes date	10/05/2016
SDS number	0380
SDS status	Approved.
Hazard statements in full	H302 Harmful if swallowed. H373 May cause damage to organs through prolonged or repeated exposure. H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

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.