SAFETY DATA SHEET
DEMON ICE

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

1.1. Product identifier

Product name DEMON ICE

Product number CDI001, CDI002, CDI096

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

Identified uses Antifreeze liquid.

1.3. Details of the supplier of the safety data sheet

Supplier
TETROSYL LIMITED
Bury
Lancashire
England
BL9 7NY
0161 764 5981
0161 797 5899
info@tetrosyl.com

Manufacturer
TETROSYL LIMITED
Bury
Lancashire
England
BL9 7NY
0161 764 5981
0161 797 5899
info@tetrosyl.com

1.4. Emergency telephone number

Emergency telephone +44 (0)161 764 5981

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Flam. Liq. 3 - H226

Health hazards STOT RE 2 - H373

Environmental hazards Not Classified

2.2. Label elements

Pictogram

Signal word Warning

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Hazard statements	H226 Flammable liquid and vapour. H373 May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P243 Take precautionary measures against static discharge. P260 Do not breathe vapour/ spray. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P314 Get medical advice/ attention if you feel unwell. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P403+P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/ container in accordance with national regulations.
Contains	ETHANEDIOL
Detergent labelling	< 5% perfumes
Supplementary precautionary statements	P240 Ground/ bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P242 Use only non-sparking tools.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ETHANEDIOL **10-<30%**

CAS number: 107-21-1 EC number: 203-473-3 REACH registration number: 01-2119456816-28-0000

Classification
Acute Tox. 4 - H302
STOT RE 2 - H373

ETHANOL **10-<30%**

CAS number: 64-17-5 EC number: 200-578-6 REACH registration number: 01-2119457610-43-0000

Classification
Flam. Liq. 2 - H225

IPA **2.5-<5.0%**

CAS number: 67-63-0 EC number: 200-661-7 REACH registration number: 01-2119457558-25-0000

Classification
Flam. Liq. 2 - H225
Eye Irrit. 2 - H319
STOT SE 3 - H336

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METHANOL		**0.5-<1%**
CAS number: 67-56-1	EC number: 200-659-6	REACH registration number: 01-2119433307-44-0000

Classification
Flam. Liq. 2 - H225
Acute Tox. 3 - H301
Acute Tox. 3 - H311
Acute Tox. 3 - H331
STOT SE 1 - H370

DIETHANOLAMINE		**0.001 - <0.1%**
CAS number: 111-42-2	EC number: 203-868-0	

Classification
Acute Tox. 4 - H302
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
STOT RE 2 - H373

ETHYL ACETATE		**0.001 - <0.1%**
CAS number: 141-78-6	EC number: 205-500-4	REACH registration number: 01-2119475103-46-0000

Classification
Flam. Liq. 2 - H225
Eye Irrit. 2 - H319
STOT SE 3 - H336

CYCLOHEXANE		**0.001 - <0.1%**
CAS number: 110-82-7	EC number: 203-806-2	
M factor (Acute) = 1	M factor (Chronic) = 1	

Classification
Flam. Liq. 2 - H225
Skin Irrit. 2 - H315
STOT SE 3 - H336
Asp. Tox. 1 - H304
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

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General information Get medical attention if any discomfort continues. Remove affected person from source of contamination. Effects may be delayed. Keep affected person under observation. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. For breathing difficulties, oxygen may be necessary. If breathing stops, provide artificial respiration.

Inhalation Remove affected person from source of contamination. Get medical attention if any discomfort continues. For breathing difficulties, oxygen may be necessary. If breathing stops, provide artificial respiration.

Ingestion Get medical attention if any discomfort continues. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if a large quantity has been ingested. Show this Safety Data Sheet to the medical personnel. Get medical attention immediately.

Skin contact Remove contaminated clothing and rinse skin thoroughly with water. Get medical attention if any discomfort continues.

Eye contact Do not rub eye. 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 irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

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. Effects may be delayed. Keep affected person under observation.

Inhalation Vapours in high concentrations are anaesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression. Irritation of nose, throat and airway.

Ingestion May cause discomfort if swallowed. May cause stomach pain or vomiting. Ingestion of large amounts may cause unconsciousness. May cause nausea, headache, dizziness and intoxication. Burning sensation in mouth. May cause unconsciousness, blindness and possibly death.

Skin contact Prolonged skin contact may cause redness and irritation. Mild dermatitis, allergic skin rash.

Eye contact Irritation of eyes and mucous membranes. Irritation, burning, lachrymation, blurred vision after liquid splash.

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

Notes for the doctor No specific recommendations. If in doubt, get medical attention promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with the following media: Foam, carbon dioxide or dry powder. Water. Use fire-extinguishing media suitable for the surrounding fire.

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 Vapours may form explosive mixtures with air. May form explosive mixture with air at very high concentration.

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

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Protective actions during firefighting No specific firefighting precautions known.

Special protective equipment for firefighters Leave danger zone immediately. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective 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. No smoking, sparks, flames or other sources of ignition near spillage. Avoid inhalation of spray mist and contact with skin and eyes. In case of spills, beware of slippery floors and surfaces.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Collect and dispose of spillage as indicated in Section 13.

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. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb spillage with non-combustible, absorbent material.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Keep away from heat, sparks and open flame. Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist. 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. Do not eat, drink or smoke when using the product. Avoid inhalation of vapours/spray and contact with skin and eyes. Avoid the formation of mists. Observe any occupational exposure limits for the product or ingredients. Avoid inhalation of vapours and spray/mists.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from heat, sparks and open flame. Keep container tightly closed. Keep containers upright. Keep only in the original container. Store away from the following materials: Acids. Oxidising materials.

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

No exposure limits known for ingredient(s).

ETHANEDIOL

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

ETHANOL

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³
Short-term exposure limit (15-minute): WEL

IPA

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³
Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³

METHANOL

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m³
Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m³
Sk

DIETHANOLAMINE

Long-term exposure limit (8-hour TWA): OES 3 ppm 15 mg/m³
Short-term exposure limit (15-minute): OES

ETHYL ACETATE

Long-term exposure limit (8-hour TWA): WEL 200 ppm
Short-term exposure limit (15-minute): WEL 400 ppm

CYCLOHEXANE

Long-term exposure limit (8-hour TWA): WEL 100 ppm 350 mg/m³
Short-term exposure limit (15-minute): WEL 300 ppm 1050 mg/m³
WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

8.2. Exposure controls

Protective equipment

Appropriate engineering controls	Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients. Provide adequate ventilation.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. It is recommended that gloves are made of the following material: Nitrile rubber. It is recommended that gloves are made of the following material: Polyvinyl chloride (PVC). Rubber (natural, latex).
Other skin and body protection	Provide eyewash station.
Hygiene measures	Wash contaminated clothing before reuse. 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 contaminated. When using do not eat, drink or smoke.

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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	Clear liquid.
Colour	Blue.
Odour	Slight alcoholic.
pH	pH (concentrated solution): 6.5 - 7.5
Melting point	Not determined.
Initial boiling point and range	~100°C @ 1.013 hPa
Flash point	30.5°C
Evaporation rate	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	1.02g/cm³ @ 20°C
Solubility(ies)	Soluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	200 - 400 cP @ 20°C
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	Not considered to be explosive.
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	The following materials may react with the product: Acids. Aldehydes. Isocyanates. Strong oxidising agents.

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 determined.

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10.4. Conditions to avoid

Conditions to avoid Avoid contact with strong oxidising agents. Avoid heat, flames and other sources of ignition. Avoid contact with the following materials: Acids. Oxidising agents. The following materials may react violently with the product: Earth metals such as sodium, potassium and barium.

10.5. Incompatible materials

Materials to avoid Strong acids. Strong oxidising agents. Alkali metals. Metal oxides. Aldehydes. Isocyanates.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects No information available.

Acute toxicity - oral

ATE oral (mg/kg) 2,232.14

Acute toxicity - dermal

ATE dermal (mg/kg) 51,724.14

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 517.24

Inhalation May cause drowsiness or dizziness. High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

Ingestion May cause stomach pain or vomiting.

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 damage to organs through prolonged or repeated exposure.

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

Acute toxicity - fish Not available.

Acute toxicity - aquatic invertebrates Not available.

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not determined.

12.4. Mobility in soil

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Mobility	The product is soluble in water.
Adsorption/desorption coefficient	Not available.

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	Not available.

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.
Disposal methods	Confirm disposal procedures with environmental engineer and local regulations.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1993
UN No. (IMDG)	1993
UN No. (ICAO)	1993
UN No. (ADN)	1993

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	FLAMMABLE LIQUID, N.O.S. (CONTAINS ETHANOL, Isopropanol)
Proper shipping name (IMDG)	FLAMMABLE LIQUID, N.O.S. (CONTAINS ETHANOL, Isopropanol)
Proper shipping name (ICAO)	FLAMMABLE LIQUID, N.O.S. (CONTAINS ETHANOL, Isopropanol)
Proper shipping name (ADN)	FLAMMABLE LIQUID, N.O.S. (CONTAINS ETHANOL, Isopropanol)

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels

14.4. Packing group

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ADR/RID packing group	III
IMDG packing group	III
ADN packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS	F-E, S-E
ADR transport category	3
Emergency Action Code	•3Y
Hazard Identification Number (ADR/RID)	30
Tunnel restriction code	(D/E)

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	EH40/2005 Workplace exposure limits
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).

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	07/08/2017
Revision	3
Supersedes date	19/07/2017
SDS number	32442
SDS status	Approved.

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Hazard statements in full

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H336 May cause drowsiness or dizziness.
H370 Causes damage to organs .
H373 May cause damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs (Kidneys) through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.