



SAFETY DATA SHEET DE-ICER TRIGGER

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name DE-ICER TRIGGER
Product No. AAQ020, ACI229, BTD500, JSB113, NTD501, PPD500, TDI501, TDI750, NDI501, PPD501, DPB502, JSB114, SCD500, NTD750, DIA005, PRO500, PRO600

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
BEVIS GREEN WORKS
WALMERSLEY
BURY
BL9 6RE
0161 764 5981
0161 797 5899
info@tetrosyl.com

Manufacturer TETROSYL LIMITED
BEVIS GREEN WORKS
WALMERSLEY
BURY
BL9 6RE
0161 764 5981
0161 797 5899
info@tetrosyl.com

1.4. Emergency telephone number

0161 764 5981

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1999/45/EEC) R10.

2.2. Label elements

Risk Phrases	R10	Flammable
Safety Phrases	S2	Keep out of the reach of children.
	S46	If swallowed, seek medical advice immediately and show this container or label.
	S51	Use only in well-ventilated areas.
	S56	Dispose of this material and its container to hazardous or special waste collection point.
	S23	Do not breathe vapour/spray.

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2.3. Other hazards**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2. Mixtures**

AMMONIA ...%			1-5%
CAS-No.: 1336-21-6	EC No.: 215-647-6		
Classification (EC 1272/2008) Skin Corr. 1B - H314 STOT SE 3 - H335 Aquatic Acute 1 - H400		Classification (67/548/EEC) C;R34 N;R50	
ETHANEDIOL			5-10%
CAS-No.: 107-21-1	EC No.: 203-473-3	Registration Number: 01-2119456816-28	
Classification (EC 1272/2008) Acute Tox. 4 - H302		Classification (67/548/EEC) Xn;R22	
ETHANOL			10-30%
CAS-No.: 64-17-5	EC No.: 200-578-6		
Classification (EC 1272/2008) Flam. Liq. 2 - H225		Classification (67/548/EEC) F;R11	
IPA			1-5%
CAS-No.: 67-63-0	EC No.: 200-661-7	Registration Number: 01-2119457558-25-XXXX	
Classification (EC 1272/2008) Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336		Classification (67/548/EEC) F;R11 Xi;R36 R67	
METHANOL			1-5%
CAS-No.: 67-56-1	EC No.: 200-659-6	Registration Number: 01-2119433307-44	
Classification (EC 1272/2008) Flam. Liq. 2 - H225 Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 2 - H330 STOT SE 1 - H370		Classification (67/548/EEC) F;R11 T;R23/24/25,R39/23/24/25	

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

DE-ICER TRIGGER**SECTION 4: FIRST AID MEASURES****4.1. Description of first aid measures**

General information

Get medical attention if any discomfort continues. Remove affected person from source of contamination. NOTE! Effects may be delayed. Keep affected person under observation. When breathing is difficult, properly trained personnel may assist affected person by administering 100% oxygen. For breathing difficulties oxygen may be necessary. If breathing stops, provide artificial respiration.

Inhalation

Remove victim immediately from source of exposure. 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. Immediately rinse mouth and drink plenty of water. If person becomes uncomfortable or if ingested in large amounts (100-150 ml for an adult person): Take to hospital along with these instructions. Get medical attention immediately!

Skin contact

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

Eye contact

Do not rub eye. Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions.

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

General information

The severity of the symptoms described will vary dependant of the concentration and the length of exposure. NOTE! Effects may be delayed. Keep affected person under observation.

Inhalation.

In high concentrations, vapours are anaesthetic and may cause headache, fatigue, dizziness and central nervous system effects. 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. Ingestion may result in unconsciousness, blindness and 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

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

SECTION 5: FIREFIGHTING MEASURES**5.1. Extinguishing media**

Extinguishing media

Use: Foam, carbon dioxide or dry powder. Water. Use fire-extinguishing media appropriate for surrounding materials.

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

Hazardous combustion products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Unusual Fire & Explosion Hazards

May form explosive mixture with air at very high concentration.

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Specific hazards

Vapours may form explosive air mixtures even at room temperature.

5.3. Advice for firefighters

Special Fire Fighting Procedures

No specific fire fighting procedure given.

Protective equipment for fire-fighters

Leave danger zone immediately. Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet. Do not smoke, use open fire or other sources of ignition. 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

Do not discharge into drains, water courses or onto the ground. The product should not be dumped in nature but collected and delivered according to agreement with the local authorities.

6.3. Methods and material for containment and cleaning up

Stop leak if possible without risk. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Provide ventilation and confine spill. Do not allow runoff to sewer. Absorb spillage with suitable absorbent material.

6.4. 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

Read and follow manufacturer's recommendations. Keep away from heat, sparks and open flame. Wear full protective clothing for prolonged exposure and/or high concentrations. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap 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 forming spray/aerosol mists. Observe occupational exposure limits and minimise the risk of inhalation of vapours and mist.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Keep containers tightly closed. Keep upright. Keep in original container. Store away from: Acids. Oxidising material.

Storage Class

Flammable liquid storage.

7.3. 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

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Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
AMMONIA ...%	WEL		18 mg/m ³		25 mg/m ³	
ETHANEDIOL	WEL		10 mg/m ³		104 mg/m ³	Sk
ETHANOL	WEL	1000 ppm	1920 mg/m ³			
IPA	WEL	400 ppm	999 mg/m ³	500 ppm	1250 mg/m ³	
METHANOL	WEL	200 ppm	266 mg/m ³	250 ppm	333 mg/m ³	Sk

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

8.2. Exposure controls

Protective equipment



Engineering measures

Observe occupational exposure limits and minimize the risk of inhalation of vapours. Provide adequate ventilation.

Respiratory equipment

No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit.

Hand protection

For prolonged or repeated skin contact use suitable protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Nitrile gloves are recommended. PVC or rubber gloves are recommended.

Eye protection

Wear approved, tight fitting safety glasses where splashing is probable.

Other Protection

Provide eyewash station.

Hygiene measures

Wash contaminated clothing before reuse. Wash hands 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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Appearance	Clear liquid.
Colour	Blue.
Odour	Slight odour. Ammonia.
Solubility	Soluble in water.
Initial boiling point and boiling range	84°C
Melting point (°C)	-25°C
Relative density	0.960
Vapour density (air=1)	
Not determined.	Scientifically unjustified.

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Vapour pressure
Not determined.

Evaporation rate
Not determined.

Scientifically unjustified.

pH-Value, Conc. Solution 11.0

Viscosity 1 cps 20°C

Decomposition temperature (°C)
Not determined.

Scientifically unjustified.

Odour Threshold, Lower
Not determined.

Scientifically unjustified.

Odour Threshold, Upper
Not determined.

Scientifically unjustified.

Flash point 23°C

Auto Ignition Temperature (°C)
Not determined.

Scientifically unjustified.

Flammability Limit - Lower(%)
Not determined.

Scientifically unjustified.

Flammability Limit - Upper(%)
Not determined.

Scientifically unjustified.

Partition Coefficient
(N-Octanol/Water) -1.36

Scientifically unjustified.

Oxidising properties
Not determined.

9.2. Other information

None.

SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity**

No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Not determined.

10.4. Conditions to avoid

Avoid contact with strong oxidisers. Avoid heat, flames and other sources of ignition. Avoid contact with acids.
Avoid contact with acids and oxidising substances. Will react violently with: Earth metals such as sodium, potassium and barium.

10.5. Incompatible materials

Materials To Avoid

Strong acids. Strong oxidising substances. Alkali metals. Metal oxides. Aldehydes. Isocyanates.

10.6. Hazardous decomposition products

None under normal conditions.

DE-ICER TRIGGER**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

Toxic Dose 1 - LD 50
6000-13000 (Ethanediol) mg/kg (oral rat)
Toxic Dose 2 - LD 50
>22270 (Ethanediol) mg/kg (oral rat)

Inhalation

Not relevant at normal room temperatures. When heated, irritating vapours may be formed.

Ingestion

Harmful if swallowed. May cause stomach pain or vomiting.

Skin contact

Slightly irritating.

Eye contact

Irritating to eyes.

Health Warnings

This chemical can be hazardous when inhaled and/or touched.

SECTION 12: ECOLOGICAL INFORMATION**Ecotoxicity**

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.1. Toxicity

LC 50, 96 Hrs, Fish mg/l 18000-46000 (Ethanediol) mg/l
EC 50, 48 Hrs, Daphnia, mg/l 46300-51100 (Ethanediol) mg/l

12.2. Persistence and degradability**Degradability**

The product is biodegradable.

12.3. Bioaccumulative potential**Bioaccumulative potential**

Will not bio-accumulate.

Partition coefficient

Not determined. -1.36

Scientifically unjustified.

12.4. Mobility in soil**Adsorption/Desorption Coefficient**

Not available.

12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

Not available.

DE-ICER TRIGGER**SECTION 13: DISPOSAL CONSIDERATIONS**

General information

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

13.1. Waste treatment methods

Confirm disposal procedures with environmental engineer and local regulations.

SECTION 14: TRANSPORT INFORMATION**14.1. UN number**

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

14.2. UN proper shipping name

Proper Shipping Name FLAMMABLE LIQUID, N.O.S. (PROPAN-2-OL, ETHANOL)

14.3. Transport hazard class(es)

ADR/RID/ADN Class	3
ADR/RID/ADN Class	Class 3: Flammable liquids.
ADR Label No.	3
IMDG Class	3
ICAO Class/Division	3
Transport Labels	

**14.4. Packing group**

ADR/RID/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
Emergency Action Code	3Y
Hazard No. (ADR)	30

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

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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), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

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 22/06/2012
Revision 27
Supersedes date 19/09/2011 v26
Safety Data Sheet Status Approved.

Risk Phrases In Full

R34 Causes burns.
R10 Flammable
R22 Harmful if swallowed.
R11 Highly flammable
R36 Irritating to eyes.
R37 Irritating to respiratory system.
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R67 Vapours may cause drowsiness and dizziness.
R50 Very toxic to aquatic organisms.

Hazard Statements In Full

H370 Causes damage to organs <<Organs>>.
H319 Causes serious eye irritation.
H314 Causes severe skin burns and eye damage.
H330 Fatal if inhaled.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H225 Highly flammable liquid and vapour.
H336 May cause drowsiness or dizziness.
H335 May cause respiratory irritation.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H400 Very toxic to aquatic life.

Disclaimer

The information provided in this document has been compiled on the basis of our current knowledge and is believed to be in accordance with the requirements of the Dangerous Substances Directive, Dangerous Preparations Directive and Safety Data Sheets Directive. The information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any particular conditions or process. The conditions and extent of storage and use of material are outside of our control and within the control of the possessor or user. Consequently it is the responsibility of the possessor or user to satisfy themselves as to the completeness of such information and the suitability of the material for their own particular circumstances, conditions or use.