



SAFETY DATA SHEET DE-ICER AEROSOL

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

1.1. Product identifier

Product name	DE-ICER AEROSOL
Product number	CDG300, CDG600, PLD600, JSB110, AOD300, AOD600, DPB600, EDI300, EDI600, FDI600, FID300, NDI311, NDI601, NDI604, PPD300, PPD600, SDI311, SDI600, SFD131, DPB300, ADI600, DIA003, FDI601, FID301, IDI612, NDI612, PRO600, RDI300, NDI645, EDI602, PDI506, NDI216

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

Identified uses	Antifreeze liquid.
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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
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Aerosol 1 - H222, H229
Health hazards	Not Classified
Environmental hazards	Not Classified

2.2. Label elements

DE-ICER AEROSOL

Pictogram



Signal word

Danger

Hazard statements

H222 Extremely flammable aerosol.
H229 Pressurised container: may burst if heated.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.

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

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	
ETHANEDIOL	5-<10%
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	
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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PETROLEUM GASES, LIQUEFIED	2.5-<5.0%
CAS number: 68476-85-7	EC number: 270-704-2
Classification Flam. Gas 1 - H220	
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	
AMMONIA ...100%	0.1-<0.3%
CAS number: 1336-21-6	EC number: 215-647-6
M factor (Acute) = 1	
Classification Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT SE 3 - H335 Aquatic Acute 1 - H400	

The full text for all hazard statements is 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. 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. Effects may be delayed. Keep affected person under observation.
Inhalation	Remove affected person from source of contamination. If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Keep affected person under observation. Get medical attention. Show this Safety Data Sheet to the medical personnel. Symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Get medical attention immediately.
Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. Keep affected person under observation. Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.
Skin contact	Wash skin thoroughly with soap and water. Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.

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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. Do not rub eye. Get medical attention promptly if symptoms occur after washing.

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 May cause an asthma-like shortness of breath. In case of overexposure, organic solvents may depress the central nervous system causing dizziness and intoxication, and at very high concentrations unconsciousness and death. Drowsiness, dizziness, disorientation, vertigo. Vapours may cause drowsiness and dizziness. Vapours in high concentrations are anaesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression.

Ingestion May cause discomfort if swallowed. May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication. Due to the physical nature of this material it is unlikely that swallowing will occur.

Skin contact Prolonged contact may cause redness, irritation and dry skin. May cause skin irritation/eczema.

Eye contact Severe irritation, burning and tearing. Vapour, spray or dust may cause chronic eye irritation or eye damage. May cause blurred vision and serious eye damage.

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 spray. 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 Containers can burst violently or explode when heated, due to excessive pressure build-up. Vapours may be ignited by a spark, a hot surface or an ember. Vapours may form explosive mixtures with air. Extremely flammable. Severe explosion hazard when vapours are exposed to flames. Risk of explosion if heated. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Containers can burst violently or explode when heated, due to excessive pressure build-up. Containers can burst violently or explode when heated, due to excessive pressure build-up.

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

5.3. Advice for firefighters

Protective actions during firefighting Risk of re-ignition after fire has been extinguished. Risk of explosion. Cool containers exposed to flames with water until well after the fire is out. Use water to keep fire exposed containers cool and disperse vapours.

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Special protective equipment for firefighters 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. Avoid inhalation of vapours. In case of spills, beware of slippery floors and surfaces.

6.2. Environmental precautions

Environmental precautions Avoid 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 For waste disposal, see Section 13. If leakage cannot be stopped, evacuate area. 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. No smoking, sparks, flames or other sources of ignition near spillage. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely.

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. Eliminate all sources of ignition. 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. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level. Do not use in confined spaces without adequate ventilation and/or respirator. Mechanical ventilation or local exhaust ventilation may be required. 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 containers upright. Protect against physical damage and/or friction. Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C. Do not store for long periods. Do not store in large quantities. Store in a cool and well-ventilated place. Keep container dry. Do not store near heat sources or expose to high temperatures.

Storage class Flammable liquid storage.

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).

ETHANOL

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

Short-term exposure limit (15-minute): WEL

ETHANEDIOL

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

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

PETROLEUM GASES, LIQUEFIED

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1750 mg/m³

Short-term exposure limit (15-minute): WEL 1250 ppm 2180 mg/m³

Carc

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

AMMONIA ...100%

Long-term exposure limit (8-hour TWA): WEL 18 mg/m³

Short-term exposure limit (15-minute): WEL 25 mg/m³

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

Carc = Capable of causing cancer and/or heritable genetic damage.

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours and spray/mists. Observe any occupational exposure limits for the product or ingredients. Use explosion-proof general and local exhaust 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

No specific hand protection recommended. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

Other skin and body protection

Provide eyewash station. Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures

Wash contaminated clothing before reuse. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap and water if skin becomes contaminated. Do not smoke in work area. When using do not eat, drink or smoke.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn.

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SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Aerosol.
Colour	Blue.
Odour	Ammonia.
Odour threshold	Not determined. Scientifically unjustified. Not determined. Scientifically unjustified.
pH	pH (concentrated solution): 11.0
Melting point	-25°C
Initial boiling point and range	Technically not feasible.
Flash point	Technically not feasible.
Evaporation rate	Not determined. Scientifically unjustified.
Upper/lower flammability or explosive limits	Scientifically unjustified. Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	0.960 @ °C
Solubility(ies)	Soluble in water.
Partition coefficient	Not determined. : -1.36 Scientifically unjustified.
Auto-ignition temperature	Not determined. Scientifically unjustified.
Decomposition Temperature	Not determined. Scientifically unjustified.
Viscosity	1 cP @ 20°C
Oxidising properties	Not determined.

9.2. Other information

Other information	None.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not relevant.
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10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight.
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10.5. Incompatible materials

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Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

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

Acute toxicity - oral

ATE oral (mg/kg) 4,146.74

Acute toxicity - dermal

ATE dermal (mg/kg) 34,580.74

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 57.63

Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

Reproductive toxicity

Reproductive toxicity - fertility No evidence of reproductive toxicity in animal studies.

Specific target organ toxicity - single exposure

STOT - single exposure Central nervous system depression including narcotic effects such as drowsiness, narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.

Target organs Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction.

Target organs Skin

Aspiration hazard

Aspiration hazard Not applicable.

General information

Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.

Inhalation

No significant hazard at normal ambient temperatures. Heating may generate the following products: Irritating gases or vapours.

Ingestion

Harmful if swallowed. May cause stomach pain or vomiting.

Skin contact

Slightly irritating.

Eye contact

Irritating to eyes.

Acute and chronic health hazards

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

Route of exposure

Inhalation Skin and/or eye contact

Target organs

Central nervous system Eyes Skin

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Medical symptoms Skin irritation. Irritation of eyes and mucous membranes. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo.

Medical considerations Skin disorders and allergies. Pre-existing eye problems.

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 aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 18000-46000 (Ethanediol) mg/l mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 46300-51100 (Ethanediol) mg/l mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The product is biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating.

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

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. Do not puncture or incinerate, even when empty.

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

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1950

UN No. (IMDG) 1950

UN No. (ICAO) 1950

UN No. (ADN) 1950

14.2. UN proper shipping name

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Proper shipping name (ADR/RID) AEROSOLS

Proper shipping name (IMDG) AEROSOLS

Proper shipping name (ICAO) AEROSOLS

Proper shipping name (ADN) AEROSOLS

14.3. Transport hazard class(es)

ADR/RID class 2.1

ADR/RID classification code 5F

ADR/RID label 2.1

IMDG class 2.1

ICAO class/division 2.1

ADN class 2.1

Transport labels



14.4. Packing group

ADR/RID packing group None

IMDG packing group None

ADN packing group None

ICAO packing group None

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS F-D, S-U

ADR transport category 2

Tunnel restriction code (D)

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

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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) (as amended).

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).

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.
Issued by	Health & Safety Department
Revision date	20/09/2017
Revision	18
Supersedes date	26/09/2016
SDS status	Approved.
Hazard statements in full	<p>H220 Extremely flammable gas. H222 Extremely flammable aerosol. H225 Highly flammable liquid and vapour. H229 Pressurised container: may burst if heated. H280 Contains gas under pressure; may explode if heated. H301 Toxic if swallowed. H302 Harmful if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H319 Causes serious eye irritation. H331 Toxic if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H370 Causes damage to organs . H373 May cause damage to organs (Kidneys) through prolonged or repeated exposure. H400 Very toxic to aquatic life.</p>