



DE-ICER

CODE : K198

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Revision date: 20/12/2021 Version: 10.51

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

1.1. Product identifier

Product form : Mixture
Trade name : DE-ICER
UFI : H6V3-C0M1-E00P-SJGR
Product code : K198
Type of product : Aerosol
Vaporizer : Aerosol

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

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only
Use of the substance/mixture : De-icer

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

SELDEN RESEARCH LIMITED

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Tel: +31 (0) 43 363 42 89
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1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aerosol, Category 1 H222;H229
Serious eye damage/eye irritation, Category 2 H319
Specific target organ toxicity — Single exposure, Category 3, Narcosis H336
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

Signal word (CLP) :

Danger

Contains :

propan-2-ol; isopropyl alcohol; isopropanol

Hazard statements (CLP) :

H222 - Extremely flammable aerosol.

H229 - Pressurised container: May burst if heated.

H319 - Causes serious eye irritation.

H336 - May cause drowsiness or dizziness.

Precautionary statements (CLP) :

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.

P264 - Wash hands thoroughly after handling.

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear eye protection, protective gloves.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P405 - Store locked up.

P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C, 122 °F.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
propan-2-ol; isopropyl alcohol; isopropanol substance with national workplace exposure limit(s) (IE, GB)	CAS-No.: 67-63-0 EC-No.: 200-661-7 EC Index-No.: 603-117-00-0 REACH-no: 01-2119457558-25	≥ 60	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
butane substance with national workplace exposure limit(s) (IE, GB)	CAS-No.: 106-97-8 EC-No.: 203-448-7 EC Index-No.: 601-004-00-0 REACH-no: 01-2119474691-32	5 – 10	Flam. Gas 1A, H220 Press. Gas
ethanediol; ethylene glycol	CAS-No.: 107-21-1 EC-No.: 203-473-3 EC Index-No.: 603-027-00-1 REACH-no: 01-2119456816-28	5 – 10	Acute Tox. 4 (Oral), H302

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
propane substance with national workplace exposure limit(s) (IE)	CAS-No.: 74-98-6 EC-No.: 200-827-9 EC Index-No.: 601-003-00-5 REACH-no: 01-2119486944-21	1 – 5	Flam. Gas 1A, H220
isobutane substance with national workplace exposure limit(s) (IE)	CAS-No.: 75-28-5 EC-No.: 200-857-2 EC Index-No.: 601-004-00-0 REACH-no: 01-2119485395-27	1 – 5	Flam. Gas 1A, H220 Press. Gas

Product subject to CLP Article 1.1.3.7. The disclosure rules of the components is modified in this case.

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Get medical advice/attention if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Get medical advice/attention.

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

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation	: High concentration of vapours may induce: headache, nausea, dizziness.
Symptoms/effects after skin contact	: Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	: Causes eye irritation.
Symptoms/effects after ingestion	: May cause a light irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable aerosol.
Explosion hazard : Explosion risk in case of fire.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources.

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6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Do not pierce or burn, even after use.
Precautions for safe handling : Do not spray on an open flame or other ignition source.
Hygiene measures : Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Does not require any specific or particular technical measures.
Storage conditions : Keep away from ignition sources. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Incompatible products : Oxidizing agent. Strong acids. Strong bases.
Incompatible materials : Direct sunlight. Heat sources. Sources of ignition.
Special rules on packaging : Keep only in original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

isobutane (75-28-5)	
Ireland - Occupational Exposure Limits	
Local name	Butane, all isomers: Isobutane
OEL STEL [ppm]	1000 ppm
Regulatory reference	Chemical Agents Code of Practice 2020
propane (74-98-6)	
Ireland - Occupational Exposure Limits	
Local name	Propane
OEL TWA [2]	1000 ppm
Remark	Asphx. (Gaseous chemical substances which may not produce significant physiological effects in the exposed employee, but when present in high concentrations will act as simple asphyxiants)

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propane (74-98-6)	
Regulatory reference	Chemical Agents Code of Practice 2020
butane (106-97-8)	
Ireland - Occupational Exposure Limits	
Local name	Butane
OEL TWA [2]	1000 ppm
OEL STEL [ppm]	1000 ppm
Regulatory reference	Chemical Agents Code of Practice 2020
United Kingdom - Occupational Exposure Limits	
Local name	Butane
WEL TWA (OEL TWA) [1]	1450 mg/m ³
WEL TWA (OEL TWA) [2]	600 ppm
WEL STEL (OEL STEL)	1810 mg/m ³
WEL STEL (OEL STEL) [ppm]	750 ppm
Remark	Carc. (only applies if Butane contains more than 0.1% of buta-1,3-diene)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)	
Ireland - Occupational Exposure Limits	
Local name	Isopropyl alcohol
OEL TWA [2]	200 ppm
OEL STEL [ppm]	400 ppm
Regulatory reference	Code of Practice for the Chemical Agents Regulations 2018
United Kingdom - Occupational Exposure Limits	
Local name	Propan-2-ol
WEL TWA (OEL TWA) [1]	999 mg/m ³
WEL TWA (OEL TWA) [2]	400 ppm
WEL STEL (OEL STEL)	1250 mg/m ³
WEL STEL (OEL STEL) [ppm]	500 ppm
Regulatory reference	EH40/2005 (Third edition, 2018). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls**8.2.1. Appropriate engineering controls**

No additional information available

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8.2.2. Personal protection equipment

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Aerosol.
Colour	: Colourless.
Odour	: characteristic.
Odour threshold	: No data available
pH	: 7
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 0.758
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Pressurised container: May burst if heated.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal use.

10.4. Conditions to avoid

Direct sunlight. Heat. Open flame.

10.5. Incompatible materials

None under normal use.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition may produce : Carbon oxides (CO, CO₂). Other toxic gases.

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SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified pH: 7
Serious eye damage/irritation	: Causes serious eye irritation. pH: 7
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause drowsiness or dizziness.

propan-2-ol; isopropyl alcohol; isopropanol

STOT-single exposure	May cause drowsiness or dizziness.
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STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Vaporizer	Aerosol
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SECTION 12: Ecological information**12.1. Toxicity**

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)

LC50 - Fish [1]	9640 mg/l
EC50 - Other aquatic organisms [1]	13299 mg/l waterflea
EC50 - Other aquatic organisms [2]	> 1000 mg/l

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential**propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)**

Partition coefficient n-octanol/water (Log Pow)	0.05
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Do not pierce or burn, even after use.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

14.1 UN number

UN-No. (ADR) : UN 1950
 UN-No. (IMDG) : UN 1950
 UN-No. (IATA) : UN 1950

14.2. UN proper shipping name

Proper Shipping Name (ADR) : AEROSOLS
 Proper Shipping Name (IMDG) : AEROSOLS
 Proper Shipping Name (IATA) : Aerosols, flammable
 Transport document description (ADR) : UN 1950 AEROSOLS, 2.1, (D)
 Transport document description (IMDG) : UN 1950 AEROSOLS, 2.1
 Transport document description (IATA) : UN 1950 Aerosols, flammable, 2.1

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 2.1
 Danger labels (ADR) : 2.1
 :



IMDG

Transport hazard class(es) (IMDG) : 2.1
 Danger labels (IMDG) : 2.1
 :



IATA

Transport hazard class(es) (IATA) : 2.1
 Danger labels (IATA) : 2.1
 :



14.4. Packing group

Packing group (ADR) : Not applicable
 Packing group (IMDG) : Not applicable
 Packing group (IATA) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
 Marine pollutant : No
 Other information : No supplementary information available

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14.6. Special precautions for user

Overland transport

Classification code (ADR)	: 5F
Special provisions (ADR)	: 190, 327, 344, 625
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P207, LP200
Special packing provisions (ADR)	: PP87, RR6, L2
Mixed packing provisions (ADR)	: MP9
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V14
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV9, CV12
Special provisions for carriage - Operation (ADR)	: S2
Tunnel restriction code (ADR)	: D

Transport by sea

Special provisions (IMDG)	: 63, 190, 277, 327, 344, 959
Limited quantities (IMDG)	: SP277
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P207, LP200
Special packing provisions (IMDG)	: PP87, L2
EmS-No. (Fire)	: F-D
EmS-No. (Spillage)	: S-U
Stowage category (IMDG)	: None
Stowage and handling (IMDG)	: SW1, SW22
Segregation (IMDG)	: SG69

Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Y203
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 203
PCA max net quantity (IATA)	: 75kg
CAO packing instructions (IATA)	: 203
CAO max net quantity (IATA)	: 150kg
Special provisions (IATA)	: A145, A167, A802
ERG code (IATA)	: 10L

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

IBC code	: Not applicable.
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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

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15.1.2. National regulations

United Kingdom

British National Regulations

: Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008.

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Gas 1A	Flammable gases, Category 1A
Flam. Liq. 2	Flammable liquids, Category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
Press. Gas	Gases under pressure
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Aerosol 1	H222;H229	On basis of test data
Eye Irrit. 2	H319	Calculation method
STOT SE 3	H336	Calculation method

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.