

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name

Iceremover

Product no.

-

REACH registration number

Not applicable

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

Relevant identified uses of the substance or mixture

NA

Anti-Freeze and De-icing products (PC4)

Nonindustrial spraying (PROC 11)

Formulation [mixing] of preparations and/or re-packaging (excluding alloys) (SU 10)

Professional uses: Public domain (administration, education, entertainment, services, craftsmen) (SU 22)

Formulation of preparations (ERC2)

Vehicles (AC1)

Uses advised against

-

The full text of any mentioned and identified use categories are given in section 16

1.3. Details of the supplier of the safety data sheet

Company and address

Pureno A/S

Rønnevangs Allé 8

3400 Hillerød

Denmark

Tlf.: +45 70 260 267

Contact person

Kenneth Christensen

E-mail

mail@pureno.dk

SDS date

2018-03-20

SDS Version

3.0

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service). See section 4 "First aid measures".

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Aerosol 1; H222, H229

Eye Irrit. 2; H319

See full text of H-phrases in section 2.2.

2.2. Label elements

Hazard pictogram(s)

Signal word

Danger

Hazard statement(s)

Extremely flammable aerosol. (H222)
 Pressurised container: May burst if heated. (H229)
 Causes serious eye irritation. (H319)

▼ Safety statement(s)

General If medical advice is needed, have product container or label at hand. (P101).
 Keep out of reach of children. (P102).

Prevention Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
 No smoking. (P210).
 Do not pierce or burn, even after use. (P251).

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

Storage Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F. (P410+P412).

Disposal -

▼ Identity of the substances primarily responsible for the major health hazards

Not applicable

2.3. Other hazards

This product contains an organic solvent. Repeated or prolonged exposure to organic solvents may result in adverse effects to the nervous system and internal organs such as liver and kidneys.

▼ Additional labelling

Not applicable

▼ Additional warnings

Not applicable

VOC

Not applicable

SECTION 3: Composition/information on ingredients**▼ 3.1/3.2. Substances/Mixtures**

NAME: ethanol
 IDENTIFICATION NOS.: CAS-no: 64-17-5 EC-no: 200-578-6 Index-no: 603-002-00-5
 CONTENT: 60-80%
 CLP CLASSIFICATION: Flam. Liq. 2, Eye Irrit. 2
 H225, H319
 NOTE: S

NAME: propan-2-ol
 IDENTIFICATION NOS.: CAS-no: 67-63-0 EC-no: 200-661-7 Index-no: 603-117-00-0
 CONTENT: 5 - <10%
 CLP CLASSIFICATION: Flam. Liq. 2, Eye Irrit. 2, STOT SE 3
 H225, H319, H336
 NOTE: S

NAME: carbon dioxide
 IDENTIFICATION NOS.: CAS-no: 124-38-9 EC-no: 204-696-9
 CONTENT: 5 - <10%
 CLP CLASSIFICATION: Refrig. Liq. Gas
 H281
 NOTE: L

(*) See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.
 S = Organic solvent L = European occupational exposure limit.

Other information

Eye Cat. 2 Sum = Sum(Ci/S(G)CLi) = 6,5136 - 9,7704

SECTION 4: First aid measures**4.1. Description of first aid measures****▼ General information**

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. The doctor can contact The National Poisons Information Service (dial 111, 24 h service). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

▼ **Inhalation**

Bring the person into fresh air and stay with him/her.

▼ **Skin contact**

Immediately remove contaminated clothing and shoes. Ensure that skin, which has been exposed to the material, is washed thoroughly with soap and water. Skin cleanser can be used. DO NOT use solvents or thinners.

▼ **Eye contact**

Remove contact lenses. Flush eyes immediately with plenty of water or isotonic water (20-30°C) for at least 15 minutes and continue until irritation stops. Make sure to flush under the upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

Ingestion

Provide plenty of water for the person to drink and stay with him/her. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the victim lean forward with head down to avoid inhalation of- or choking on vomited material.

Burns

Rinse with water until the pain stops then continue to rinse for a further 30 minutes.

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

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

IF exposed or concerned: Get immediate medical advice/attention.

Information to medics

Bring this safety data sheet.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended: alcohol-resistant foam, carbonic acid, powder, water mist. Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous catabolic substances are produced. These are: Carbon oxides. Fire will result in dense black smoke. Exposure to combustion products may harm your health. Fire fighters should wear appropriate protection equipment. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

6.2. Environmental precautions

No specific requirements.

6.3. Methods and material for containment and cleaning up

Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations. To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section on "Disposal considerations" in regard of handling of waste. See section on 'Exposure controls/personal protection' for protective measures.

SECTION 7: Handling and storage**▼7.1. Precautions for safe handling**

Avoid static electricity.

Smoking, storage of tobacco, consumption and storage of food or liquids are not allowed in the workrooms. See section on 'Exposure controls/personal protection' for information on personal protection.

▼7.2. Conditions for safe storage, including any incompatibilities

Always store in containers of the same material as the original container. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Storage temperature

No data available.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****▼OEL**

carbon dioxide

Long-term exposure limit (8-hour TWA reference period): 5000 ppm | 9150 mg/m³

Short-term exposure limit (15-minute reference period): 15000 ppm | 27400 mg/m³

propan-2-ol

Long-term exposure limit (8-hour TWA reference period): 400 ppm | 999 mg/m³

Short-term exposure limit (15-minute reference period): 500 ppm | 1250 mg/m³

ethanol

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

Short-term exposure limit (15-minute reference period): - ppm | - mg/m³

▼DNEL / PNEC

DNEL (ethanol): 950 mg/m³

Exposure: Inhalation

Duration of Exposure: Long term – Systemic effects - Workers

DNEL (ethanol): 1900 mg/m³

Exposure: Inhalation

Duration of Exposure: Short term – Local effects - Workers

DNEL (ethanol): 343 mg/kg legemsvægt pr. dag

Exposure: Dermal

Duration of Exposure: Long term – Systemic effects - Workers

DNEL (ethanol): 114 mg/m³

Exposure: Inhalation

Duration of Exposure: Long term – Systemic effects - General population

DNEL (ethanol): 950 mg/m³

Exposure: Inhalation

Duration of Exposure: Short term – Local effects - General population

DNEL (ethanol): 206 mg/kg legemsvægt pr. dag

Exposure: Dermal

Duration of Exposure: Long term – Systemic effects - General population

DNEL (ethanol): 87 mg/kg legemsvægt pr. dag

Exposure: Oral

Duration of Exposure: Long term – Systemic effects - General population

DNEL (propan-2-ol): 888 mg/kg bw/dag

Exposure: Dermal

Duration of Exposure: Long term – Systemic effects - Workers

DNEL (propan-2-ol): 500 mg/m³

Exposure: Inhalation

Duration of Exposure: Long term – Systemic effects - Workers

DNEL (propan-2-ol): 319mg/kg bw/dag
Exposure: Dermal
Duration of Exposure: Long term – Systemic effects - General population

DNEL (propan-2-ol): 89mg/m³
Exposure: Inhalation
Duration of Exposure: Long term – Systemic effects - General population

DNEL (propan-2-ol): 26mg/kg bw/dag
Exposure: Oral
Duration of Exposure: Long term – Systemic effects - General population

PNEC (ethanol): 0,96 mg/l
Exposure: Freshwater

PNEC (ethanol): 0,79 mg/l
Exposure: Marine water

PNEC (ethanol): 2,75 mg/l
Exposure: Intermittent release

PNEC (ethanol): 580 mg/l
Exposure: Sewage Treatment Plant

PNEC (ethanol): 3,6 mg/kg
Exposure: Freshwater sediment

PNEC (ethanol): 2,9 mg/kg
Exposure: Marine water sediment

PNEC (ethanol): 0,63 mg/kg
Exposure: Soil

PNEC (propan-2-ol): 552mg/kg
Exposure: Marine water sediment

PNEC (propan-2-ol): 140,9 mg/l
Exposure: Freshwater

PNEC (propan-2-ol): 28 mg/kg
Exposure: Soil

PNEC (propan-2-ol): 140,9 mg/l
Exposure: Marine water

PNEC (propan-2-ol): 140,9 mg/l
Exposure: Intermittent release

PNEC (propan-2-ol): 251 mg/l
Exposure: Sewage Treatment Plant

PNEC (propan-2-ol): 552 mg/kg
Exposure: Freshwater sediment

8.2. Exposure controls

▼ Compliance with the accepted occupational exposure limits values should be controlled on a regular basis.

General recommendations

Observe general occupational hygiene standards.

Exposure scenarios

In the event exposure scenarios are appended to the safety data sheet, the operational conditions and risk management measures in these shall be complied with.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above). Installation of an exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and -showers are clearly marked.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

Measures to avoid environmental exposure

No specific requirements.

Individual protection measures, such as personal protective equipment



Generally

Use only CE marked protective equipment.

▼ Respiratory Equipment

If ventilation at the work place is insufficient, use a half- or full mask with an appropriate filter or an air-supplied breathing apparatus depending on the specific work situation and how long you will be using the product. In outdoor use no requirements.

Skin protection

No Special

Hand protection

Recommended: Nitrile rubber

Eye protection

Wear safety glasses with side shields.

SECTION 9: Physical and chemical properties

▼ 9.1. Information on basic physical and chemical properties

Form	Aerosol
Colour	Clear
Odour	Alcohol odor
Odour threshold (ppm)	No data available.
pH	No data available.
Viscosity (40°C)	No data available.
Density (g/cm ³)	0,9

Phase changes

Melting point (°C)	No data available.
Boiling point (°C)	No data available.
Vapour pressure	No data available.
Decomposition temperature (°C)	No data available.
Evaporation rate (n-butylacetate = 100)	No data available.

Data on fire and explosion hazards

Flash point (°C)	14
Ignition (°C)	No data available.
Auto flammability (°C)	No data available.
Explosion limits (% v/v)	No data available.
Explosive properties	No data available.

Solubility

Solubility in water	Insoluble
n-octanol/water coefficient	No data available.

9.2. Other information

Solubility in fat (g/L)	No data available.
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SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under the conditions, noted in the section "Handling and storage".

▼ 10.3. Possibility of hazardous reactions

Nothing special

▼ 10.4. Conditions to avoid

Avoid static electricity. Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

▼ Acute toxicity

Substance: carbon dioxide
 Species: Rat
 Test: LC50
 Route of exposure: Inhalation
 Result: 470000 ppm 0,5 h

Substance: propan-2-ol
 Species: Rabbit
 Test: LD50
 Route of exposure: Dermal
 Result: >2000 mg/kg

Substance: propan-2-ol
 Species: Rat
 Test: LD50
 Route of exposure: Oral
 Result: 5840 mg/kg

Substance: propan-2-ol
 Species: Rat
 Test: LC50
 Route of exposure: Inhalation
 Result: 47,5mg/l 8 h

Substance: propan-2-ol
 Species: Rat
 Test: LC50
 Route of exposure: Inhalation
 Result: 66,1mg/l 4 h

Substance: ethanol
 Species: Rabbit
 Test: LD50
 Route of exposure: Dermal
 Result: >17100 mg/kg

Substance: ethanol
 Species: Rat
 Test: LD50
 Route of exposure: Oral
 Result: 10470 mg/kg

Substance: ethanol
 Species: Rat
 Test: LC50
 Route of exposure: Inhalation
 Result: 124,7 mg/l

▼ Skin corrosion/irritation

No data available.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

Long term effects

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

SECTION 12: Ecological information**▼ 12.1. Toxicity**

Substance: propan-2-ol
Species: Algae
Test: NOEC
Duration: 8d
Result: >1800 mg/l

Substance: propan-2-ol
Species: Fish
Test: LC50
Duration: 96 h
Result: 8970-9280 mg/l

Substance: propan-2-ol
Species: Daphnia
Test: EC50
Duration: 24 h
Result: 9714 mg/l

Substance: propan-2-ol
Species: Crustacean
Test: EC10
Duration: 18 h
Result: 5175 mg/l

Substance: propan-2-ol
Species: Crustacean
Test: EC50
Duration:
Result: >1000mg/l

Substance: ethanol
Species: Fish
Test: LC50
Duration: 48 h
Result: 8150 mg/l

Substance: ethanol
Species: Fish
Test: LC50
Duration: 96h
Result: 1100 mg/l

Substance: ethanol
Species: Daphnia
Test: EC50
Duration: 48 h
Result: 9268-14221 mg/l

Substance: ethanol
Species: Algae
Test: EC0
Duration: 168 h
Result: 5000 mg/l

Substance: ethanol
Species: Crustacean
Test: EC0
Duration: 16 h
Result: 6500 mg/l

12.2. Persistence and degradability

Substance	Biodegradability	Test	Result
propan-2-ol	Yes	Modified OECD Screening Test	95%
ethanol	Yes	No data available	No data available

12.3. Bioaccumulative potential

Substance	Potential bioaccumulation	LogPow	BCF
carbon dioxide	No	0,83	No data available
propan-2-ol	No	No data available	No data available
ethanol	No	No data available	No data available

12.4. Mobility in soil

carbon dioxide: Log Koc= 0,735677, Calculated from LogPow (High mobility potential.).

▼ **12.5. Results of PBT and vPvB assessment**

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

▼ **12.6. Other adverse effects**

Nothing special

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Product is covered by the regulations on hazardous waste.

Waste

EWC code
16.05.04

Specific labelling

-

▼ **Contaminated packing**

Contaminated packaging must be disposed of similarly to the product.

SECTION 14: Transport information**14.1 – 14.4**

This product is within scope of the regulations of transport of dangerous goods.

ADR/RID

14.1. UN number	1950
14.2. UN proper shipping name	-
14.3. Transport hazard class(es)	2.1
14.4. Packing group	-
Notes	-
Tunnel restriction code	-

IMDG

UN-no.	1950
Proper Shipping Name	Aerosols
Class	2.1
PG*	-
EmS	F-D, S-U
MP**	NO
Hazardous constituent	-

IATA/ICAO

UN-no.	1950
Proper Shipping Name	Aerosols
Class	2.1
PG*	-

14.5. Environmental hazards

-

14.6. Special precautions for user

-

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

No data available

(*) Packing group

(**) Marine pollutant

SECTION 15: Regulatory information

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

Restrictions for application

People under the age of 18 shall not be exposed to this product cf. Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

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Additional information

Not applicable

Seveso

Seveso III Part 1: P3a

Sources

Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.

Council Directive 75/324/EEC of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677. The Stationery Office, 2002.

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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (CLP).

EC regulation 1907/2006 (REACH).

The Control of Major Accident Hazards (COMAH) Regulations 2015.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H225 - Highly flammable liquid and vapour.

H281 - Contains refrigerated gas; may cause cryogenic burns or injury.

H319 - Causes serious eye irritation.

H336 - May cause drowsiness or dizziness.

The full text of identified uses as mentioned in section 1

PC4 = Anti-Freeze and De-icing products

PROC 11 = Nonindustrial spraying

SU 10 = Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

SU 22 = Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

ERC2 = Formulation of preparations

AC1 = Vehicles

Additional label elements



Other

In accordance with Regulation (EC) No. 1272/2008 (CLP) the evaluation of the classification of the mixture is based on:

The classification of the mixture in regard of physical hazards has been based on experimental data.

The classification of the mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP)

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is

not necessarily correct for use with other chemicals/products.

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The safety data sheet is validated by

KAO

Date of last essential change

(First cipher in SDS version)

2017-01-03(2.0)

Date of last minor change

(Last cipher in SDS version)

2017-01-03