

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

FINO ICE Coolant Spray

REF 42082

Further trade namesBUTANE
PROPANEProduct group: Alkohole
CAS No: 74-98-6
Index No: 601-003-00-5
EC No: 200-827-9**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Auxiliary for manufacture of dental prothesis

Uses advised against

People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this mixture.

1.3. Details of the supplier of the safety data sheet

| | | |
|-------------------------|---|-------------------------------|
| Company name: | FINO GmbH | |
| Street: | Mangelsfeld 18 | |
| Place: | D-97708 Bad Bocklet | |
| Telephone: | +49-97 08-90 94 20 | Telefax: +49-97 08-90 94 21 |
| e-mail: | info@fino.com | e-mail: info@fino.com |
| Contact person: | Joachim Mahlmeister | Telephone: +49-97 08-90 94 20 |
| Internet: | www.fino.com | |
| Responsible Department: | This number can only be reached during our office hours, Monday to Friday from 8 a.m. to 5 p.m. | |

2.1. Classification of the substance or mixture**Regulation (EC) No. 1272/2008**Hazard categories:
Aerosol: Aerosol 1
Hazard Statements:
Extremely flammable aerosol.
Pressurised container: May burst if heated.**2.2. Label elements****Regulation (EC) No. 1272/2008****Hazard components for labelling**

butane / propane

Signal word: Danger**Pictograms:****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.

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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.

Special labelling of certain mixtures

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep out of the reach of children.

Additional advice on labelling

The product is classified and labelled according to EC directives or corresponding national laws.

2.3. Other hazards

Results of PBT and vPvB assessment not applicable.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Chemical characterization

Mixture from the below listed substances with harmless additives.

Hazardous components

| CAS No | Chemical name | | | Quantity |
|----------|------------------------|--------------|----------|----------|
| | EC No | Index No | REACH No | |
| | GHS Classification | | | |
| 106-97-8 | butane | | | 50-70 % |
| | 203-448-7 | 601-004-00-0 | | |
| | Flam. Gas 1; H220 | | | |
| 74-98-6 | propane | | | 30-50 % |
| | 200-827-9 | 601-003-00-5 | | |
| | Flam. Gas 1; H220 | | | |
| 64-17-5 | ethanol; ethyl alcohol | | | < 2,0 % |
| | 200-578-6 | 603-002-00-5 | | |
| | Flam. Liq. 2; H225 | | | |

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

Specific Conc. Limits, M-factors and ATE

| CAS No | EC No | Chemical name | Quantity |
|----------|-----------|---|----------|
| | | Specific Conc. Limits, M-factors and ATE | |
| 106-97-8 | 203-448-7 | butane | 50-70 % |
| | | inhalation: LC50 = 273000 ppm (gases) | |
| 64-17-5 | 200-578-6 | ethanol; ethyl alcohol | < 2,0 % |
| | | inhalation: LC50 = 95,6 mg/l (vapours); oral: LD50 = 6200 mg/kg | |

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

No special measures are necessary.

After inhalation

Provide fresh air.

Seek medical attention if problems persist.

After contact with skin

The product is not skin irritating.

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After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. If symptoms persist consult doctor.

After ingestion

Seek medical attention if problems persist.

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

This information is not available.

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 (CO₂), Extinguishing powder
In case of major fire and large quantities: Water spray jet, alcohol resistant foam

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

No further relevant information available.

5.3. Advice for firefighters

No special measures are necessary.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General measures**

Keep unprotected persons away.
Provide adequate ventilation.

For non-emergency personnel

Emergency procedures
Remove victim out of the danger area. Remove persons to safety. The danger areas must be delimited and identified using relevant warning and safety signs.

For emergency responders

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Wear personal protection equipment (refer to section 8).

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**For containment**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
Following consultation with waste management company and after biological pre-treatment, landfill together with household waste.

For cleaning up

For cleaning, approved industrial vacuum cleaners are recommended, dust class:
Collect in closed and suitable containers for disposal.

Other information

Provide adequate ventilation.
Do not flush with water or watery cleaning agents

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Treat the recovered material as prescribed in the section on waste disposal. Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Handle and open container with care.
Use only in well-ventilated areas.

Advice on protection against fire and explosion

Pressurized container: protect from sunlight and do not expose to temperatures exceeding {temp 50}. Do not pierce or burn, even after use.
Do not spray on naked flames or any incandescent material.
Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharges.

Further information on handling

No special handling advices are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in a cool, well-ventilated place.
Observe official regulations on storing packagings with pressurized containers.

Hints on joint storage

Keep/Store only in original container.

Further information on storage conditions

Keep container tightly closed.
Do not keep the container sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.

@0702.B007466

@1502.B015216 ---

7.3. Specific end use(s)

Auxiliary for dental technology

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|----------|-----------|------|-------------------|-----------|---------------|--------|
| 106-97-8 | Butane | 600 | 1450 | | TWA (8 h) | WEL |
| | | 750 | 1810 | | STEL (15 min) | WEL |
| 64-17-5 | Ethanol | 1000 | 1920 | | TWA (8 h) | WEL |

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DNEL/DMEL values

| CAS No | Substance | Exposure route | Effect | Value |
|--------------------------|------------------------|----------------|----------|-------------------------|
| 64-17-5 | ethanol; ethyl alcohol | | | |
| Worker DNEL, acute | | inhalation | local | 1.900 mg/m ³ |
| Worker DNEL, long-term | | dermal | systemic | 343 mg/kg bw/day |
| Worker DNEL, long-term | | inhalation | systemic | 950 mg/m ³ |
| Consumer DNEL, long-term | | oral | systemic | 87 mg/kg bw/day |
| Consumer DNEL, long-term | | dermal | systemic | 206 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 114 mg/m ³ |

PNEC values

| CAS No | Substance | Value |
|--|------------------------|------------|
| 64-17-5 | ethanol; ethyl alcohol | |
| Freshwater | | 0,96 mg/l |
| Marine water | | 0,79 mg/l |
| Freshwater sediment | | 3,6 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 580 mg/l |
| Soil | | 0,63 mg/kg |

Additional advice on limit values

The lists valid during the making were used as basis.

8.2. Exposure controls



Appropriate engineering controls

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Protective and hygiene measures

The usual precautionary measures are to be adhered to when handling chemicals.

Wash hands before breaks and after work.

Do not eat, drink or smoke when using this product.

Eye/face protection

Tightly sealed safety glasses.

Hand protection

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The precise time of rupture can be found out from the manufacturer of the protective gloves and must be observed.

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Skin protection

Not required.

Respiratory protection

Not required if room is well ventilated.

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

| | |
|-----------------|----------------|
| Physical state: | Aerosol |
| Colour: | translucent |
| Odour: | characteristic |

Changes in the physical state

| | |
|---|-----------------------------|
| Melting point: | not determined |
| Boiling point or initial boiling point and boiling range: | Not applicable, as aerosol. |
| Softening point: | not applicable |
| Flash point: | Not applicable, as aerosol. |
| Sustaining combustion: | No data available |

Flammability

| | |
|---------------|----------------|
| Solid/liquid: | not determined |
| Gas: | not determined |

Explosive properties

not explosive. However, formation of explosive air/vapour mixtures are possible.

| | |
|----------------------------|-------------|
| Lower explosion limits: | 1,5 vol. % |
| Upper explosion limits: | 10,9 vol. % |
| Auto-ignition temperature: | 365 °C |

Self-ignition temperature

| | |
|----------------------------|------------------------------|
| Solid: | Product is not selfigniting. |
| Decomposition temperature: | partially miscible |

Oxidizing properties

Not oxidising.

| | |
|--|------------------------|
| Vapour pressure: (at 20 °C) | 5000 hPa |
| Density (at 20 °C): | 0,57 g/cm ³ |
| Water solubility: | partially miscible |
| Partition coefficient n-octanol/water: | not determined |
| Relative vapour density: | not determined |
| Evaporation rate: | not determined |
| Solvent content: | 60,00 % |

9.2. Other information**SECTION 10: Stability and reactivity****10.1. Reactivity**

No specific test data related to reactivity available for this product or its ingredients.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

No decomposition if used according to specifications.

10.5. Incompatible materials

No specific if used according to specifications.

10.6. Hazardous decomposition products

No dangerous decomposition products known.

SECTION 11: Toxicological information
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity

Based on available data, the classification criteria are not met.

No toxicology known.

| CAS No | Chemical name | | | | | |
|----------|-------------------------|---------------|-----------|--------|--------|--|
| | Exposure route | Dose | Species | Source | Method | |
| 106-97-8 | butane | | | | | |
| | inhalation (4 h) gas | LC50 ppm | 273000 | Rat | GESTIS | |
| 64-17-5 | ethanol; ethyl alcohol | | | | | |
| | oral | LD50 mg/kg | 6200 | Rat | IUCLID | |
| | inhalation (4 h) vapour | LC50 | 95,6 mg/l | Rat | RTECS | |

Irritation and corrosivity

Based on available data, the classification criteria are not met.

No irritant effect.

Sensitising effects

Based on available data, the classification criteria are not met.

No sensitizing effect known.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

No additional indications for carcinogenic or mutagenic impacts and effects toxic for reproduction .

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

No specific information.

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

Toxicological analyses are not available.

Additional information on tests

none

Practical experience

No special references.

11.2. Information on other hazards
Endocrine disrupting properties

Based on available data, the classification criteria are not met.

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Other information

No special precautionary measures.

SECTION 12: Ecological information
12.1. Toxicity

Don't let flow into the ground water, in waters or the sewage system undiluted resp. in larger quantities.

| CAS No | Chemical name | | | | | |
|----------|--------------------------|---------------|-----------------|---------|---------------|--------|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 106-97-8 | butane | | | | | |
| | Acute fish toxicity | LC50 mg/l | 27,98 | 96 h | | |
| | Acute algae toxicity | ErC50 mg/l | 7,71 | 96 h | | |
| 74-98-6 | propane | | | | | |
| | Acute fish toxicity | LC50 mg/l | 27,98 | 96 h | | |
| | Acute algae toxicity | ErC50 mg/l | 7,71 | 96 h | | |
| 64-17-5 | ethanol; ethyl alcohol | | | | | |
| | Acute fish toxicity | LC50 mg/l | 15.400 | 96 h | | |
| | Acute algae toxicity | ErC50 mg/l | 22.000 | 96 h | | |
| | Acute crustacea toxicity | EC50 mg/l | 9268 - 14221 | 48 h | Daphnia magna | IUCLID |
| | Algae toxicity | NOEC | 675 mg/l | 4 d | | |
| | Crustacea toxicity | NOEC | 1.806 | 10 d | | |

12.2. Persistence and degradability

none Evidence exists for biodegradation processes.

12.3. Bioaccumulative potential

Respective data are not available.

Partition coefficient n-octanol/water

| CAS No | Chemical name | Log Pow |
|----------|------------------------|---------|
| 106-97-8 | butane | 2,89 |
| 74-98-6 | propane | 2,36 |
| 64-17-5 | ethanol; ethyl alcohol | -0,77 |

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No effects known.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Must not be disposed together with household garbage.
Do not allow to enter into surface water or drains.

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

Contaminated packaging

Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
 Hazard label: 2.1



Classification code: 5F
 Special Provisions: 190 327 344 625
 Limited quantity: 1 L
 Excepted quantity: E0
 Transport category: 2
 Tunnel restriction code: D

Inland waterways transport (ADN)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
 Hazard label: 2.1



Classification code: 5F
 Special Provisions: 190 327 344 625
 Limited quantity: 1 L
 Excepted quantity: E0

Marine transport (IMDG)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -

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Hazard label: 2.1



Special Provisions: 63, 190, 277, 327, 344, 381,959
 Limited quantity: 1000 mL
 Excepted quantity: E0
 EmS: F-D, S-U

14.6. Special precautions for user

Not known.

14.7. Maritime transport in bulk according to IMO instruments

No special precautionary measures.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 28

2010/75/EU (VOC): 100 % (570 g/l)

2004/42/EC (VOC): 100 % (570 g/l)

Information according to 2012/18/EU (SEVESO III): P3a FLAMMABLE AEROSOLS

Additional information: P5c

Additional information

The product is classified and labelled according to EC directives or corresponding national laws.
 Classification according to Regulation (EC) No 1272/2008 [CLP]

National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

Additional information

Betriebssicherheitsverordnung (BetrSichV) ---
 No further data.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

* Data changed compared with the previous version

Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer
 (Regulations Concerning the International Transport of Dangerous Goods by Rail)

"IATA-DGR: Dangerous Goods Regulations by the ""International Air Transport Association"" (IATA)"

ICAO: International Civil Aviation Organization

"ICAO-TI: Technical Instructions by the ""International Civil Aviation Organization"" (ICAO)"

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)
 VOC: Volatile Organic Compounds (USA, EU)
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 Flam. Gas. 1: Flammable gases, Hazard Category 1
 Aerosol 1: Aerosole, Hazard Category 1
 Press. Gas Comp: Gases under pressure - compacted gas
 Flam. Lig. 2: Flammable liquids, Hazard Category 2

Relevant H and EUH statements (number and full text)

H220 Extremely flammable gas.
 H222 Extremely flammable aerosol.
 H225 Highly flammable liquid and vapour.
 H229 Pressurised container: May burst if heated.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

Identified uses

| No | Short title | LCS | SU | PC | PROC | ERC | AC | TF | Specification |
|----|-----------------|-----|----|----|------|-----|----|----|---------------|
| 1 | Flammable gases | PW | 0 | 0 | 16 | 4 | 0 | 94 | 11 |

LCS: Life cycle stages

SU: Sectors of use

PC: Product categories

PROC: Process categories

ERC: Environmental release categories

AC: Article categories

TF: Technical functions

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)