

Safety Data Sheet

according to Regulation (EC) No. 1907/2006

Freezer Spray

Print date: 06.03.2012

Product code: Miracold_Plus

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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.
90 % by mass of the contents are flammable.

SECTION 3: Composition/information on ingredients**Mixtures****Hazardous components**

| EC No. | Chemical name | Quantity |
|--------------|--|----------|
| CAS No. | Classification | |
| Index No. | GHS classification | |
| REACH No. | | |
| 203-448-7 | butane | 40-70 % |
| 106-97-8 | F+ R12 | |
| 601-004-00-0 | Flam. Gas 1; H220 | |
| 200-827-9 | propane | 25-50 % |
| 74-98-6 | F+ R12 | |
| 601-003-00-5 | Flam. Gas 1; H220 | |
| 203-523-4 | hexane (containing < 5 % n-hexane (203-777-6)); 2-methylpentane | 10-25 % |
| 107-83-5 | F, Xn, Xi, N R11-65-38-67-51-53 | |
| 601-007-00-7 | Flam. Liq. 2, Asp. Tox. 1, Skin Irrit. 2, STOT SE 3, Aquatic Chronic 2; H225 H304 H315 H336 H411 | |

Full text of R- and H-phrases: see section 16.

SECTION 4: First aid measures**Description of first aid measures****After inhalation**

Provide fresh air.

After contact with skin

After contact with skin, wash immediately with: Water. Change contaminated clothing.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

After ingestion

If swallowed, immediately drink: Water.

Most important symptoms and effects, both acute and delayed

No data available

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing media**Carbon dioxide (CO₂). Foam. Extinguishing powder.**Extinguishing media which must not be used for safety reasons**

Water with tenside additive. Water.

Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air. Heating causes rise in pressure with risk

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of bursting.

Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray/stream to protect personnel and to cool endangered containers. Use a water spray jet to knock down vapours/gases/mists. Contaminated fire-fighting water must be collected separately. Do not empty into drains or the aquatic environment.

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

Remove all sources of ignition. Provide adequate ventilation.

Environmental precautions

Do not empty into drains or the aquatic environment. Explosion hazard.

Methods and material for containment and cleaning up

Ventilate affected area.

SECTION 7: Handling and storage**Precautions for safe handling****Advice on safe handling**

In case of open handling equipment with built-in suction must be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from sources of ignition - No smoking.

Advice on storage compatibility

Do not store together with: Material, rich in oxygen, oxidizing.

SECTION 8: Exposure controls/personal protection**Control parameters****Exposure limits (EH40)**

| CAS No. | Chemical name | ml/m ³ | mg/m ³ | F/ml | Category | Origin |
|----------|---------------|-------------------|-------------------|------|---------------|--------|
| 106-97-8 | Butane | 600 | 1450 | | TWA (8 h) | WEL |
| | | 750 | 1810 | | STEL (15 min) | WEL |

Exposure controls**Occupational exposure controls**

In case of open handling equipment with built-in suction must be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Change contaminated clothing. Wash hands before breaks and at the end of work. When using do not eat or drink.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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Hand protection

Tested protective gloves are to be worn: Butyl rubber. In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

Eye protection

Tightly sealed safety glasses.

Skin protection

Protective clothing:

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

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

Test method**Changes in the physical state**

| | |
|--------------------------------|------------------------|
| Boiling point: | -0,5 °C |
| Flash point: | < 0 °C |
| Lower explosion limits: | 1,2 vol. % |
| Upper explosion limits: | 9,4 vol. % |
| Ignition temperature: | 300 °C |
| Vapour pressure: (at 20 °C) | 2100 hPa |
| Vapour pressure: (at 50 °C) | 4900 hPa |
| Density: | 0,56 g/cm ³ |

SECTION 10: Stability and reactivity**Reactivity**

No data available

Chemical stability

No data available

Possibility of hazardous reactions

No data available

Conditions to avoid

Keep away from heat. Ignition hazard.

Incompatible materials

No data available

Hazardous decomposition products

No data available

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

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Acute toxicity

| CAS No. | Chemical name | | | | |
|----------|---------------------------|--------|---------|---------|---|
| | Exposure routes | Method | Dose | Species | h |
| 106-97-8 | butane | | | | |
| | Acute inhalation toxicity | LC50 | 658 ppm | Ratte | 4 |

Additional information on tests

The classification was undertaken in accordance with the calculation method governed by the Preparations Directive (1999/45/EC).

SECTION 12: Ecological information**Toxicity**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Bioaccumulative potential**Partition coefficient n-octanol/water**

| CAS No. | Chemical name | Log Pow |
|----------|---|---------|
| 106-97-8 | butane | 2,89 |
| 107-83-5 | hexane (containing < 5 % n-hexane (203-777-6)); 2-methylpentane | 3,21 |

Further information

Do not empty into drains or the aquatic environment. The classification was undertaken in accordance with the calculation method governed by the Preparations Directive (1999/45/EC).

SECTION 13: Disposal considerations**Waste treatment methods****Advice on disposal**

Waste disposal according to official state regulations.

Waste disposal number of waste from 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 dangerous substances
Classified as hazardous waste.

Waste disposal number of contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

Contaminated packaging

Cleaned containers may be recycled. Handle contaminated packaging in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

UN number: UN1950
UN proper shipping name: AEROSOLS
Transport hazard class(es): 2
 Hazard label: 2.1

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

Other applicable information (land transport)

E0

Inland waterways transport

UN number: UN1950
UN proper shipping name: AEROSOLS
Transport hazard class(es): 2
 Hazard label: 2.1



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

Other applicable information (inland waterways transport)

E0

Marine transport

UN number: UN1950
UN proper shipping name: AEROSOLS
Transport hazard class(es): 2
Packing group: -
 Hazard label: 2, see SP63

Special Provisions: 63, 190, 277, 327, 344, 959
 Limited quantity: See SP277
 EmS: F-D, S-U

Other applicable information (marine transport)

E0

Air transport

UN/ID number: UN1950
UN proper shipping name: AEROSOLS, flammable
Transport hazard class(es): 2.1
 Hazard label: 2.1



Special Provisions: A145 A167

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| | | |
|--|---------|--------|
| Limited quantity Passenger: | 30 kg G | |
| IATA-packing instructions - Passenger: | | 203 |
| IATA-max. quantity - Passenger: | | 75 kg |
| IATA-packing instructions - Cargo: | | 203 |
| IATA-max. quantity - Cargo: | | 150 kg |

Other applicable information (air transport)

E0
: Y203

Environmental hazards

Dangerous for the environment: no

SECTION 15: Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

1999/13/EC (VOC): 65,5 % (366,8 g/l)

National regulatory information**SECTION 16: Other information****Full text of R-phrases referred to under sections 2 and 3**

| | |
|-------|---|
| 11 | Highly flammable. |
| 12 | Extremely flammable. |
| 38 | Irritating to skin. |
| 51 | Toxic to aquatic organisms. |
| 52/53 | Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| 53 | May cause long-term adverse effects in the aquatic environment. |
| 65 | Harmful: may cause lung damage if swallowed. |
| 67 | Vapours may cause drowsiness and dizziness. |

Full text of H-Statements referred to under sections 2 and 3

| | |
|------|--|
| H220 | Extremely flammable gas. |
| H225 | Highly flammable liquid and vapour. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H336 | May cause drowsiness or dizziness. |
| H411 | Toxic to aquatic life with long lasting effects. |

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