



SAFETY DATA SHEET

Freezer Spray

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

1.1. Product identifier

Product name FASTFREEZE™ Pipe Freeze Spray

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

Identified uses Pipe Freeze Spray for water pipe system isolation.

1.3. Details of the supplier of the safety data sheet

Supplier Kibosh Ltd
 Unit 9 Huddersfield Street
 Galashiels
 Scotland, UK
 TD1 3BF
 sales@kiboshinnovation.com

1.4. Emergency telephone number

Emergency telephone: **Kibosh Ltd** +44 (0)1896 753571 **Aztec Aerosols** +44 (0)1270 656380 (Monday to Friday, 9am to 5pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture Classification (EC 1272/2008)

Physical hazards Aerosol 3 - H229

Health hazards Not Classified

Environmental hazards Not Classified

Physicochemical Not considered to be a significant hazard due to the small quantities used. Aerosol containers can explode when heated, due to excessive pressure build-up.

2.2. Label elements

Signal word Warning

Hazard statements H229 Pressurised container: may burst if heated.

Precautionary statements P102 Keep out of reach of children.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P251 Do not pierce or burn, even after use.
 P260 Do not breathe vapour/ spray.
 P271 Use only outdoors or in a well-ventilated area.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
 P501 Dispose of contents/ container in accordance with local regulations.

Supplemental label information Contains HFO-1234ze (CAS number: 29118-24-9).

Pipe Freeze Spray

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

| | | | |
|--|----------------------|----------------------------|----------------------|
| HFO-1234ze | | | 60-100% |
| CAS number: 29118-24-9 | EC number: 471-480-0 | REACH registration number: | 010000019758-54-XXXX |
| Classification Press. Gas (Liq.) - H280 | | | |

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 | Move affected person to fresh air at once. |
| Inhalation | Move affected person to fresh air at once. If breathing stops, provide artificial respiration. Keep affected person warm and at rest. Get medical attention immediately. |
| Ingestion | Rinse mouth thoroughly with water. |
| Skin contact | Rinse with water. Get medical attention if any discomfort continues. |
| Eye contact | Rinse with water. Get medical attention if any discomfort continues. |

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

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| Notes for the doctor | Treat symptomatically. |
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SECTION 5: Firefighting measures

5.1. Extinguishing media

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| Suitable extinguishing media | The product is not flammable. Cool aerosol containers exposed to heat with water spray and remove container, if no risk is involved. |
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5.2. Special hazards arising from the substance or mixture

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|------------------|---|
| Specific hazards | Containers can burst violently or explode when heated, due to excessive pressure build-up. Decomposes on contact with flames and hot surfaces to produce hydrofluoric acid and fluorophosgene. Containers can burst violently or explode when heated, due to excessive pressure build-up. |
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5.3. Advice for firefighters

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| Protective actions during firefighting | Warn firefighters that aerosols are involved. Containers close to fire should be removed or cooled with water. |
| Special protective equipment protective for firefighters | Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate clothing. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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| Personal precautions | Wear protective clothing as described in Section 8 of this safety data sheet. |
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Pipe Freeze Spray

6.2. Environmental precautions

Environmental precautions Not considered to be a significant hazard due to the small quantities used.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up VENTILATE/EVAPORATE.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. 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.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 degrees Centigrade. Do not pierce or burn, even after use.

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

Ingredient comments WEL = Workplace Exposure Limits

HFO-1234ze (CAS: 29118-24-9)

Ingredient comments SUP = Supplier's recommendation.

DNEL Workers - Inhalation; Long term systemic effects: 3902 mg/m³
Consumer - Inhalation; Long term systemic effects: 830 mg/m³

PNEC - Fresh water; 0.1 mg/l

8.2. Exposure controls

Appropriate engineering controls This product must not be handled in a confined space without adequate ventilation.

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

Eye/face protection Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.

Hand protection 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 Not relevant

Hygiene measures Good personal hygiene procedures should be implemented. Clean equipment and the work area every day.

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Aerosol.

Pipe Freeze Spray

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|---------------------------------|--|
| Colour | Colourless. |
| Odour | No characteristic odour. |
| pH | Neutral. |
| Melting point | -108°C |
| Initial boiling point and range | -19°C @ |
| Flash point | Boils without flashing. |
| Vapour pressure | 4.192 hPa @ 20°C 10.998 hPa @ 54.4°C |
| Vapour density | 4 |
| Relative density | 1.206 |
| Solubility(ies) | 0.373 g/l @ °C |
| Partition coefficient | log Pow: 1.6 |
| Auto-ignition temperature | 368°C |
| Comments | Information given is applicable to the major ingredient. |

9.2. Other information

| | |
|---------------------------|---|
| Other information | Not available. |
| Molecular weight | 102.4 g/mol |
| Volatile organic compound | This product contains a maximum VOC content of 0 g/l. |

SECTION 10: Stability and reactivity

10.1. Reactivity

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|------------|---|
| Reactivity | Stable at normal ambient temperatures and when used as recommended. |
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10.2. Chemical stability

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

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| Possibility of hazardous reactions | Does not decompose when used and stored as recommended. |
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10.4. Conditions to avoid

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| Conditions to avoid | Avoid heat, flames and other sources of ignition. |
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10.5. Incompatible materials

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| Materials to avoid | Keep away from oxidising materials, heat and flames. |
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10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or products combustion products may include the following substances: Toxic and corrosive gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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| General information | This product has low toxicity. Only large quantities are likely to have adverse effects on human health. |
| Inhalation | May cause respiratory system irritation. |

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|----------------------------------|---|
| Ingestion | No specific health hazards known. |
| Skin contact | Skin irritation should not occur when used as recommended. |
| Eye contact | Irritating to eyes. |
| Acute and chronic health hazards | This product has low toxicity. Only large quantities are likely to have adverse effects on human health. |
| Route of exposure | Inhalation |
| Target organs | Respiratory system, lungs |
| Medical symptoms | Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Headache. Fatigue. Nausea, vomiting. |

Toxicological information on ingredients.

HFO-1234ze

Germ cell mutagenicity

| | |
|-------------------------|--|
| Genotoxicity - in vitro | Chromosome aberration, Human lymphocytes.: Negative. Ames test: Negative. |
| Genotoxicity - in vivo | Gene mutation, (Mammalian bone-marrow cytogenetic test, chromosomal analysis), Mouse, Micronucleus., Inhalation: Negative. |

Reproductive toxicity

| | |
|-----------------------------------|---|
| Reproductive toxicity - fertility | Two-generation study - NOAEL >20000 ppm, Inhalation, Rat F1, P |
| Reproductive toxicity development | Maternal toxicity:, NOEC, Developmental toxicity:, NOAEC - : 15000 ppm, Inhalation, Rat |

SECTION 12: Ecological information

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| Ecotoxicity | No data on possible environmental effects have been found. |
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12.1. Toxicity

| | |
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| Toxicity | Not available. |
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Ecological information on ingredients.

HFO-1234ze

Acute aquatic toxicity

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|--|---|
| Acute toxicity - fish | LC ₀ , 96 hours: >117 mg/l, Cyprinus carpio (Common carp) |
| Acute toxicity - aquatic invertebrates | EC ₅₀ , 48 hours: >160 mg/l, Daphnia magna |
| Acute toxicity - aquatic plants | NOEC, Biomass ., Growth rate, 72 hours: >170 mg/l, Algae |
| Acute toxicity - terrestrial | LC ₀ , 4 hours: >207000 ppm, Rat NOEC, Repeated Dose Toxicity, 90 days: 5000 ppm, Rat |

12.2. Persistence and degradability

| | |
|-------------------------------|----------------|
| Persistence and degradability | Not available. |
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Ecological information on ingredients.

HFO-1234ze

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|-----------------|--|
| Persistence and | Aerobic Not readily biodegradable. degradability |
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12.3. Bioaccumulative potential

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|---------------------------|----------------|
| Bioaccumulative potential | Not available. |
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Partition coefficient log Pow: 1.6

Ecological information on ingredients.

HFO-1234ze

Partition coefficient log Pow: 1.6

12.4. Mobility in soil

Mobility Not known.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment Not available.

12.6. Other adverse effects

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information 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.

SECTION 14: Transport information

General This product is packed in accordance with the Limited Quantity Provisions of CDGCPL2, ADR and IMDG. These provisions allow transport of aerosols of less than 1 litre packed in cartons of less than 30kg gross weight to be exempt from control providing that they are labelled in accordance with the requirements of these regulations to show that they are being transported as Limited Quantities. Aerosols not so packed and labelled must show the following.

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

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 2.2

ADR/RID classification code 5A

ADR/RID label 2.2

IMDG class 2.2

ICAO class/division 2.2

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ADN class 2.2

Transport labels

14.4. Packing group

ADR/RID packing group None

IMDG packing group None

ICAO packing group None

ADN packing group None

14.5. Environmental hazardsEnvironmentally hazardous substance/marine pollutant
No.14.6. Special precautions for user

EmS F-D, S-U

ADR transport category 3

Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC CodeTransport in bulk according to Not
applicable. Annex II of MARPOL 73/78 and
the IBC Code**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.
The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677)
(as amended).
The Aerosol Dispensers Regulations 2009 (SI 2009 No. 2824).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment
Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].

EU legislation Commission Regulation (EU) No 2015/830 of 28 May 2015.

Guidance Approved Classification and Labelling Guide (Sixth edition) L131.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments Supplemental information added.

Revision date 03/01/2020

Revision 2

SDS number 21355

SDS status Approved.

Hazard statements in full H229 Pressurised container: may burst if heated.
H280 Contains gas under pressure; may explode if heated.

Pipe Freeze Spray

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.