SAFETY DATA SHEET
Arctic Spray

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

1.1. Product identifier

Product name Arctic Spray

Product number ZE1 - ZE2

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

Identified uses Freezer Spray

1.3. Details of the supplier of the safety data sheet

Supplier

Arctic Hayes
Unit 11 Glover Way
Parkside Industrial Estate
Beeston
Leeds
LS11 5JP
(T) +44 (0)113 271 5245

1.4. Emergency telephone number

Emergency telephone +44 (0)113 271 5245

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.

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

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: 01-0000019758-54-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.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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.

5.2. Special hazards arising from the substance or mixture

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.

5.3. Advice for firefighters

Protective actions during firefighting Warn firefighters that aerosols are involved. Containers close to fire should be removed or cooled with water.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

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

Occupational exposure limits

HFO-1234ze

Long-term exposure limit (8-hour TWA): SUP 800 ppm

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

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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.
Colour	Colourless.
Odour	No characteristic odour.
Melting point	-108°C
Initial boiling point and range	-26°C @
Flash point	n/a°C
Vapour pressure	561 kPa @ °C
Vapour density	3.5 (Air = 1)
Relative density	1.206
Partition coefficient	Pow: 1.06
Auto-ignition temperature	>743°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

Reactivity	Stable at normal ambient temperatures and when used as recommended.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Does not decompose when used and stored as recommended.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid	Keep away from oxidising materials, heat and flames.

10.6. Hazardous decomposition products

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

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

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.
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.

SECTION 12: Ecological Information

Ecotoxicity No data on possible environmental effects have been found.

12.1. Toxicity

Toxicity Not available.

Ecological information on ingredients.

HFO-1234ze

Acute aquatic toxicity

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.

Ecological information on ingredients.

HFO-1234ze

Persistence and degradability	Aerobic Not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential Not available.

Partition coefficient Pow: 1.06

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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,5O
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

ADN packing group None

ICAO packing group None

14.5. Environmental hazards

Environmentally 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 Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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 453/2010 of 20 May 2010.

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 This is first issue.

Revision date 19/10/2017

Revision 1

SDS number 21337

SDS status Approved.

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