

Material Safety Data Sheet

Information Required for Substances for Use at Work (C.O.S.H.H.)

1. Trade Name & Product Information

Supplier: Hayes UK Limited
Unit 7 Eagle Industrial Estate, Billingshurst,
West Sussex, England, RH14 9RZ.
Tel: 08700 711700 Fax: 08700 711701

Product Name(s): Code 88.5000 ICEMAN Pro-Freeze **Pipe Freezer Gas**

2. Composition Information

Ingredients	CAS No.	Hazard/Risk Codes	Weight/Conc.
1,1,1,2 - Tetrafluoroethane	811-97-2	S9, S23, S24/25, S41	100%
Composition Comments:			

3 - Hazards Identification

Adverse human health effects	Contains a liquefied gas. Contact of liquid may cause frostbite and injury to the cornea.
Main symptoms	May have a narcotic effect at high concentrations
Physical and Chemical Hazards	Heating will cause a rise in pressure with a risk of bursting. On combustion, toxic gases are released.
Classification/Specific Hazards	According to EEC criteria, this product is not classified as a hazardous substance.

4 - First Aid Measures

Inhalation	Move the affected person away from the contaminated area and into the fresh air Make the affected person rest. If breathing stops, give artificial respiration. Call a doctor immediately.
Skin contact	Contact of liquid with the skin: Rinse immediately with plenty of warm water. Immediately remove contaminated clothing or footwear. If it stick do not pull it off. Cover the affected area with a sterile dressing. Transfer to hospital immediately.
Eye contact	Contact of liquid with the eyes: Rinse with water whilst keeping the eyes wide open. Consult an eye specialist immediately
Ingestion	Not specifically applicable
Notes to the physician	Avoid administering adrenaline or any other similar products

5 - Fire Fighting Measures

Extinguishing Media	Use extinguishing media appropriate for surrounding fire
Specific hazards	Pressurized container. On heating there is a risk of bursting due to internal pressure build-up. NOT flammable, however it may present a risk in the event of fire. Toxic vapours (halogen compounds) are released.
Specific fire fighting methods	Stay upwind. Evacuate the personnel away from the fumes. Cool down the containers exposed to heat with a water spray
Protection of fire fighters	Self-contained breathing apparatus

6 - Accidental Release Measures

Personal precautions	Avoid contact with the skin and eyes. Do not breathe gas. NO naked flames. Do NOT smoke. For further information refer to section 8 "Exposure controls /Personal protection." heavy vapours, shut off low level openings in the vicinity (ventilation shafts, drains) Prevent the product from entering cellars, basements or pits Ventilate spillage areas Ventilate basements.
Environmental precautions	Prevent the product from spreading into the environment
Methods for cleaning up	
- Recovery	Recover as much of the product as possible
- Cleaning/Decontamination	Allow residual product to evaporate.
- Disposal	For disposal of contaminated materials refer to Section 13: "Disposal Considerations".

7 - Handling & Storage

HANDLING

Measures	Avoid contact with hot surfaces Avoid high temperatures Smoking is forbidden
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STORAGE

Technical Measures	Storage facilities should be: <ul style="list-style-type: none">▪ Equipped with ventilation at low level.▪ Take all necessary precautions to avoid the accidental release of the product outside, due to the rupture of containers or transfer systems.
Storage conditions	Keep: <ul style="list-style-type: none">▪ the container dry▪ in a cool well ventilated area▪ at temperatures not exceeding 45°C▪ away from any heat source▪ away from any source of ignition
Incompatible products	Refer to the detailed list of incompatible materials (section 10 "Stability/Reactivity")

8 - Exposure controls/Personal protection

Engineering measures	Ensure good ventilation whilst working
Control parameters	
Occupational Exposure limits	
- Limits (UK)	OES: 1000ppm (4200 mg/m ³) Long term exposure limit – 8h TWA reference point
Personal Protective Equipment	
- Respiratory protection	In the event of insufficient ventilation: Self contained breathing apparatus
- Hand protection	Handling re Fridgerated product: Protective gloves insulated against the cold

- Eye protection	Handling re Fridgerated product: Goggles
- Skin and body protection	Handling re Fridgerated product: Impermeable clothing
Hygiene measures	Do NOT drink, eat or smoke in the workplace

9 - Physical and Chemical Properties

Appearance	Compressed liquefied gas in an aerosol
Odour/Taste	Characteristic colourless/etherial
Specific Gravity	Liquid product: 1200kg/m ³ at 25°C
PH-value	Not applicable
Oxidizing properties	Non oxidizing material according to EEC criteria
Flash Point	No Flash point (in test conditions)
Vapour Pressure	671 kPa at 25°C

10 - Stability & Reactivity

Stability	Stable under normal conditions
Materials to Avoid	Reacts violently with: <ul style="list-style-type: none"> ▪ alkali metals ▪ alkaline earth metals ▪ magnesium ▪ powdered metals
Conditions to Avoid	Heat flames and other sources of ignition
Hazardous Decomposition	Thermal decomposition at high temperatures giving toxic and corrosive products; Hydrogen Fluoride (Hydrofluric Acid), Oxides of Carbon

11 - Toxicological Information

Inhalation	Vapour: Move to fresh air – use oxygen or artificial respiration if needed, if problems persist seek medical attention
Skin contact	Liquid: Injection of liquified gas will cause frost bite.
Eye Contact	Liquid: Injection of liquified gas will cause frost bite
Ingestion	Vapour: unlikely to cause irritation to humans.

12 - Ecological Information

Behaviour in the environment -	
Mobility	Product is volatile when in an aqueous solution
Persistence/Degradability	Slightly biodegradeable
Bioaccumulation	Not bioaccumulable
Destination of the product	Ultimate destination of the product: AIR
Ecotoxicity -	
Effects on the aquatic environment	No information available

13 - Disposal Considerations

Disposal methods Do not puncture or cut can until completely purged
Dispose of in accordance with local authority requirements.

14 - Transport Information

Land Rail/Road (RID/ADR) UN number: 1950
Class: 2

Air (ICAO/IATA) UN number: 1950
Class: 2.2
Labelling: 2 Non-flammable Gas

Sea (IMO/IMDG) UN number: 1950
Class: 2.2
Labelling: 2 Gaz Comprime Ininflammable
Marine Pollutant: No

Other Regulations Classification for conveyance: Non-flammable compressed gas
Emergency action code: 2RE

15 - Regulatory Information

ECC regulations	Mandatory labeling of hazardous substances not applicable.
- R phrases	No R phrases.
- S phrases	S9 – Keep container in a well ventilated place. S2 – Do not breathe the gas. S24/25 – Avoid contact with skin and eyes. S41 – In case of fire and/or explosion do not breathe fumes.

16 - Other Information

Recommended Use This product is usually used for forming iceplugs in heating pipes

Chemical formula C2 H2 F4

Molecular Mass 102.04g

Registration numbers Registered in the TSCA inventory
Registered in the EINECS inventory

Disclaimer: The above information is based on the our knowledge of the product at the time of publication, it is given I good faith. No warranty is implied with respect to the quality or specification of the product, the user must satisfy themselves that the product is entirely suitable for the purpose intended.