



Material Safety Data Sheet

Safety data sheet Code **AF-1UK**
Issue Date **14/02/06**
Amendment No. **02**
Date of last amendment **05/06/09**
Sheets **6**

SECTION 1: Identification of substance/preparation and company

Identification of substance:

22 oz. Arctic Freeze, R-134a Refrigerant +

Product number: **AF22**

Manufacturer's Address:

Interdynamics, Inc.
560 White Plains Road
Tarrytown, New York 10591
USA Emergency telephone number:
(Chemtrec) 1-800-424-9300
703-527-3887

UK Distributor's Office:

Interdynamics Europe
Unit 8
The Links
Popham Close
Hanworth
Middlesex
TW13 6JE
UK Emergency telephone number:
0870-243-0279

SECTION 2: Composition/information on ingredients

<u>SUBSTANCE</u>	<u>CONCENTRATION</u>	<u>CAS No</u>	<u>EEC No</u>	<u>HAZARD</u>
1,1,1,2-tetrafluoroethane (HFC-134a)	83%	811-97-2	-	Not hazardous
Polyol ester	11%	-	-	Harmful: May cause lung damage if swallowed
Emkarate 1700 (rubber sealant)	<1%	-	-	Harmful: May cause lung damage if swallowed



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QwickBoost	6%	-	-	Harmful: May cause lung damage if swallowed
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SECTION 3: Hazards identification

Note: This preparation is supplied packaged in an aerosol container. Therefore, classification as 'Harmful: May cause lung damage if swallowed' is not required.

This preparation is not hazardous within the meaning of the Dangerous Preparations Directive 99/45/EC (as amended and adapted to technical progress).

May cause frostbite on prolonged direct contact with skin.

SECTION 4: First aid measures

Eyes: Flush with water for 15 minutes, lifting upper and lower eyelids. Get medical attention if irritation persists.

Skin: Prolonged direct exposure may cause frostbite-like injury. Wash with cold or tepid water. Obtain medical attention.

Inhalation: Remove victim to fresh air. However, not considered a likely route of exposure.

Ingestion: Do not induce ingestion, obtain medical attention. However, not considered a likely route of exposure.

SECTION 5: Fire fighting measures

Flash point: Not determined.

Extinguishing media: Foam, Carbon dioxide, water spray or ABS dry chemical.

Special fire fighting procedures: Wear appropriate personnel protective equipment e.g. self-contained breathing apparatus with full-face piece operated under pressure.

Unusual fire and explosion hazards:

- Containers will explode if exposed to heat.
- Material may become flammable when mixed with air under pressure and exposed to very high temperatures.
- Contact with reactive metals may result in the formation of explosive or exothermic reactions when exposed to very high temperatures/pressures.

SECTION 6: Accidental release measures

If cans rupture:



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- Exclude unnecessary personal
- Ventilate area.
- Contain any oil spillage, prevent entry into drains, sewers, waterways. Absorb using appropriate inert absorbent. Transfer into suitable containers and dispose of as special waste.

SECTION 7: Handling and storage

Handling: Workers should wear protective overalls, gloves and safety goggles.

Storage: Store away from sources of ignition or heat, in a cool, dry well ventilated area at 10 - 30°C. Avoid direct light.

SECTION 8: Exposure controls/personal protection

	8 hour average - ppm	8 hour average – mg/m ³
1,1,1,2- tetrafluoroethane	1000	4240

Personal protective equipment: Workers should wear protective overalls, solvent resistant gloves and safety goggles.

Ventilation: Local exhaust ventilation recommended.

Under conditions of frequent or heavy occupational use, respiratory protection may be required, e.g. any supplied air respirator with a full face piece that is operated in a pressure-demand or other positive pressure modes.

SECTION 9: Physical and chemical properties

Appearance: Clear.

Odour: Ethereal and ester odour.

Solubility in water: Not known.

pH: not applicable

Boiling point: -32°C point @ 760mmHg

Specific gravity: Not applicable.

Vapour density (air =1): 3.5

Evaporation rate (Butyl acetate =1): Greater than 1

Vapour pressure (gas): 85.8mmHg @ 50°C.

SECTION 10: Stability and reactivity

Stability: This product is stable.

Polymerisation: Will not occur

Conditions to avoid: Do not mix with oxygen or air above atmospheric pressure. High temperatures may yield toxic and/or corrosive decomposition products.

Materials to avoid:



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- At high temperatures and high pressures freshly abraded aluminium surfaces may cause strong exothermic reactions.
- Avoid reactive metals such as potassium, calcium, powdered aluminium, magnesium, zinc, copper.
- Avoid strong oxidising agents

Hazardous decomposition products: Hydrofluoric acid, phosgene and similar carbonyl halides, carbon monoxide and carbon dioxide.

SECTION 11: Toxicological information

Chronic health effects: No data available.

Carcinogenity: Does not contain listed carcinogens

Medical conditions aggravated by exposure: May adversely affect use of catecholamine drugs such as Epinephrine. Prolonged exposure may cause kidney and liver damage.

Acute health effects:

Inhalation: Dizziness, loss of coordination or lung irritation. Exposure to very high concentration can induce anesthetic effect. Excessive inhalation exposure may cause irritation of respiratory passages. Can act as an asphyxiant by limiting oxygen. Cardiac sensitization to circulating epinephrine-like compounds can result in fatal cardiac arrhythmias. Remove to fresh air. Give artificial respiration if not breathing. Give oxygen if breathing labored. If cardiac arrest, apply external cardiac massage. Do not administer Adrenaline or similar drugs as cardiac arrhythmias may result. Obtain medical attention immediately.

Eye Contact: Liquid splashes or vapor spray may cause freeze burns. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for 15 minutes. Have eyes examined and treated by medical personnel.

Skin Contact: Liquid form of this material may cause freeze burns (frostbite-like lesions). Thaw affected areas with water, remove contaminated clothing carefully. Wash affected areas of skin thoroughly with plenty of warm water. Obtain medical attention. Prolonged contact with skin may cause red skin irritation or dermatitis. Remove oil from skin by washing well with soap and water. Launder clothing before reuse.

Ingestion: May be harmful if swallowed. Do not induce vomiting. Obtain medical attention.

SECTION 12: Ecological information

This product has not been evaluated for environmental effects.

Mobility: No data available

Degradability: 1,1,1,2-tetrafluoroethane decomposed comparatively rapidly in the lower atmosphere. Atmospheric lifetime of propellant is approximately 15 years.

Biodegradability: 1,1,1,2-tetrafluoroethane residues (static test method (Bismuth active substance)) 100% in 19 days.

Short and long term effects: 1,1,1,2-tetrafluoroethane does not deplete ozone

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SECTION 13: Disposal considerations

Ensure that the container is empty.

Do not pierce, incinerate or expose to temperatures above 50°C even when empty.

Dispose of in accordance with local authority regulations.

Contact supplier if guidance is required.

SECTION 14: Transport information

UN Nr.:	1950
UN hazard class:	2.2 Non-flammable gas
IMO/IMDG:	2.2
Packaging group:	2102, 2102A
Marine pollutant:	No
IATA/ICAO:	2.2
Labelling:	non-flammable gas
ADR/GGVS:	2.2
Item:	5° A
TRANSPORT NAME:	N/A

15: Regulatory information

This product is not considered hazardous within the meaning of the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002

UK Regulatory references:

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002

The Control of Substances Hazardous to Health Regulations 1988

Guidance notes:

Approved classification and labelling guide (5th edition)

The compilation of safety data sheets (3rd edition)

EH 40 Occupational Exposure Limits

SECTION 16: Other information

The information contained in this Data Sheet is provided in accordance with the Chemical (Hazard Information and Packaging for Supply) Regulations, 2002. It does not constitute the users own assessment of work place risks as required by other Health and Safety legislation.

Disclaimer: *All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, therefore users are responsible for verifying the data under their own operating*

conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publications of use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use



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in combination with any other material or process.