MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: **Freeze Spray**

Product Number (s): **14086, 74086**

Product Use: dissipate heat and cool circuits

Manufacturer / Supplier Contact Information:

In United States:
CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com
1-215-674-4300 (General)
(800) 521-3168 (Technical)
(800) 272-4620 (Customer Service)

In Canada:
CRC Canada Co.
2-1246 Lorimar Drive
Mississauga, Ontario L5S 1R2
www.crc-canada.ca
1-905-670-2291

In Mexico:
CRC Industries Mexico
Av. Benito Juárez 4055 G
Colonia Orquídea
San Luís Potosí, SLP CP 78394
www.crc-mexico.com
52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

CAUTION: Contents Under Pressure.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Appearance & Odor: Expelled product is a clear gas with a faint ethereal odor. Pressurized product is a liquefied gas.

Potential Health Effects:

ACUTE EFFECTS:

EYE: Contact with dispersed gas is not expected to cause negative effects. Contact with direct spray can cause severe irritation, redness, tearing, blurred vision, and possible freeze burns.

SKIN: Contact with dispersed gas is not expected to cause negative effects. Contact with direct spray can cause frostbite, irritation and dermatitis.

INHALATION: Inhalation of dispersed gas is not expected to cause negative effects. Inhalation of concentrated vapor may product anesthetic effects and feeling of euphoria. Prolonged exposure can cause rapid breathing, headache, dizziness, narcosis, and unconsciousness. Deliberately inhaling this product can lead to death from asphyxiation depending on concentration and time of exposure.

INGESTION: Ingestion of liquid product may cause frostbite to mouth and throat. Liquid product may pose aspiration hazard.

CHRONIC EFFECTS: Unknown

TARGET ORGANS: None known

Medical Conditions Aggravated by Exposure: None known

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2	100

Section 4: First Aid Measures

Eye Contact: For liquid contact or direct spray effects, immediately flush with plenty of water for 15 minutes. Call a physician if frostbite occurs.

Skin Contact: For liquid contact or direct spray effects, warm area gradually and get medical attention if there is evidence of tissue damage. Flush area with plenty of water. Treat as frostbite.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician immediately.

Ingestion: Do not induce vomiting. Contact a physician immediately.

Note to Physicians: Treat symptomatically.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is non-flammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3(c)(6)).

Flash Point:	None (COC)	Upper Explosive Limit:	NA
Autoignition Temperature:	ND	Lower Explosive Limit:	NA

Fire and Explosion Data:

Suitable Extinguishing Media: As appropriate for combustibles in area.

Products of Combustion: Oxides of carbon, halogen acids (thermal decomposition)

Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and explode.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Stop the release of the material if possible. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Ventilate area to disperse the vapor plume.

Methods for Containment & Clean-up: Eliminate sources of ignition. Ventilate the area with plenty of fresh air, especially low areas where vapors may accumulate. If in confined space or if a large plume has been emitted, workers should wear appropriate respiratory protection.

Section 7: Handling and Storage

Handling Procedures: Avoid breathing vapors. Vapors are heavier than air and may travel along the ground. High vapor concentrations may lead to asphyxiation. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F to prevent cans from rupturing. Keep out of reach of children.

Aerosol Storage Level: I

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

	OSHA		ACGIH		OTHER		
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURCE	UNIT
1,1,1,2-Tetrafluoroethane (HFC-134a)	NE	NE	NE	NE	1000	AIHA	ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as insulated rubber. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: dispensed product is a gas; pressurized product is a liquefied gas
Color: colorless
Odor: ethereal
Odor Threshold: ND
Specific Gravity: 1.24
Initial Boiling Point: -15.5°F
Freezing Point: ND
Vapor Pressure: 70 psig @ 70°F
Vapor Density: 3.5 (air = 1)
Evaporation Rate: very fast
Solubility: 0.95% (in water) @ 70°F
Coefficient of water/oil distribution: ND
pH: NA
Volatile Organic Compounds: wt %: 0 (exempt) g/L: 0 lbs./gal: 0

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: High heat, open flame

Incompatible Materials: Alkali or alkaline earth metals (such as NA, K, or Ba); finely divided metals; magnesium and alloys containing more than 2% magnesium

Hazardous Decomposition Products: Halogen acids

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
1,1,1,2-Tetrafluoroethane (HFC-134a)	No data	No data	1500 g/m^3/4H

Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
1,1,1,2-Tetrafluoroethane (HFC-134a)	No	No	No	No	Unknown

E – Eye S – Skin R - Respiratory

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: No information available
Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: This product, as packaged, is a RCRA hazardous waste for reactivity with a waste code of D003. (See 40 CFR Part 261.20 – 261.33)
Dispensed product is not a hazardous waste. Empty aerosol containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): Consumer Commodity, ORM-D

ICAO/IATA (air): Consumer Commodity, ID8000,9

IMO/IMDG (water): 1,1,1,2-Tetrafluoroethane, UN3159, 2.2, Limited Quantity

Special Provisions: DOT-SP 11644: In accordance with this special permit, the product container is marked with DOT-SP11644 instead of 2Q. This packaging is approved for shipping as a Consumer Commodity.

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):
All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):
Reportable Quantities (RQ's) exist for the following ingredients: None

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:
Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:

Fire Hazard	No
Reactive Hazard	No
Release of Pressure	Yes
Acute Health Hazard	Yes
Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
None

Clean Air Act:
Section 112 Hazardous Air Pollutants (HAPs): None

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):
This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: This product is not regulated.

State Right to Know:

New Jersey:	811-97-2
Pennsylvania:	811-97-2
Massachusetts:	811-97-2
Rhode Island :	811-97-2

Canadian Regulations:

Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: A, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

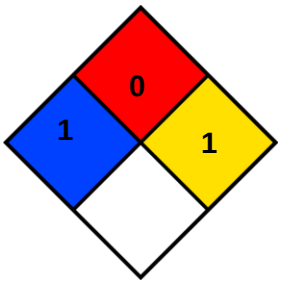
Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	**1**
Flammability:	**0**
Reactivity:	**1**
PPE:	**B**

Ratings range from 0 (no hazard) to 4 (severe hazard)

NFPA



Prepared By: Michelle Rudnick
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Changes since last revision: Section 14: Transport Information

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
g/L: grams per Liter
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
lbs./gal: pounds per gallon
LC: Lethal Concentration
LD: Lethal Dose
NA: Not Applicable
ND: Not Determined
NIOSH: National Institute of Occupational Safety & Health
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PMCC: Pensky-Martens Closed Cup
PPE: Personal Protection Equipment
ppm: Parts per Million
RoHS: Restriction of Hazardous Substances
STEL: Short Term Exposure Limit
TCC: Tag Closed Cup
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Information System