



SAFETY DATA SHEET

SECTION 1. Identification of the hazardous chemical substance or mixture and of the supplier or manufacturer

Name of the hazardous chemical substance or mixture	Freeze Spray - 283 g	
Other means of identification		
Product Code	Item# 1751371	
Recommended use of the hazardous chemical substance or mixture, and restrictions of use		
Recommended use	Dissipates heat and cool circuits	
Recommended restrictions	None known.	
Suppliers details		
Company name	CRC Industrias de Mexico S. de R. L. de C.V.	
Address	Cerrada Canadá 201-H Fraccionamiento Industrial Martel Santa Catarina, NL 66367 Mexico	
Telephone	General Information	81-2139-0572
Website	www.crc-mexico.com	
E-mail	SoporteTecnico@crcind.com	
Emergency phone number	24-Hour Emergency	01-800-681-9531

SECTION 2. Hazard identification

Classification of the substance or mixture		
Physical hazards	Aerosols	Category 3
	Gases under pressure	Liquefied gas
Health hazards	Not classified.	
Environmental hazards	Not classified.	

Elements of labeling, including precautionary statements and warning pictograms



Signal word	Warning
Hazard statement	
H229	Pressurized container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
Precautionary statement	
Prevention	
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P251	Do not pierce or burn, even after use.
Response	Wash hands after handling.
Storage	
P410 + P403	Protect from sunlight. Store in a well-ventilated place.
P412	Do not expose to temperatures exceeding 50°C/122°F.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Other hazards which do not result in classification	None known.
Supplemental information	When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride.

SECTION 3. Composition/information on ingredients

Mixtures

Chemical identity	Common name(s), synonym(s)	CAS number and other unique identifiers	Concentration
1,1,1,2-tetrafluoroethane	HFC-134a	811-97-2	90 - 100

Composition comments Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

SECTION 4. First-aid measures

Description of necessary first-aid measures

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT give epinephrine (adrenaline). Get medical attention if symptoms persist.

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.

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

Ingestion Do not induce vomiting. Call a physician immediately.

Most important symptoms/effects, acute and delayed Contact with liquefied gas might cause frostbites, in some cases with tissue damage.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride.

Special protective actions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.

Specific methods Cool containers exposed to flames with water until well after the fire is out.

General fire hazards Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

SECTION 6. Measures that must be taken in the event of accidental spillage or an accidental leak

Personal precautionary measures, protective equipment and emergency procedure

For non-emergency personnel Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

For emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

Methods and materials for containing and cleaning up spills or releases Stop leak if you can do so without risk. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Absorb in vermiculite, dry sand or earth and place into containers. Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

SECTION 7. Handling and storage

Precautions for safe handling	Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Level 1 Aerosol. Contents under pressure. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in tightly closed container. Store in a well-ventilated place. Stored containers should be periodically checked for general condition and leakage. Store away from incompatible materials (see Section 10 of the SDS).

SECTION 8. Exposure controls/personal protection

Control parameters	
Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Control banding approach	Not available.
Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment (PPE)	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear protective gloves such as: Neoprene.
Other	Wear suitable protective clothing.
Respiratory protection	If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Aerosol.
Color	Colorless.
Odor	Ether-like.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-149.8 °F (-101 °C)
Initial boiling point and boiling range	-15.5 °F (-26.4 °C)
Flash point	None.
Evaporation rate	Very fast.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.

Vapor pressure	6652.8 hPa estimated
Vapor density	3.5 (air = 1)
Relative density	1.24
Solubility(ies)	
Solubility (water)	0.95 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	> 1369.4 °F (> 743 °C)
Decomposition temperature	694.4 °F (368 °C)
Viscosity	Not available.
Molecular weight	Not available.
Other information	
Partition coefficient (oil/water)	1.68
Percent volatile	100 % estimated

SECTION 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions that must be avoided	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Hydrogen fluoride. Carbonyl fluoride. Carbon oxides.

SECTION 11. Toxicological information

Information about likely routes of entry

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.
Skin contact	Contact with dispersed gas is not expected to cause negative effects. Contact with direct spray can cause frostbite, irritation and dermatitis.
Eye contact	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.
Ingestion	Ingestion of liquid product may cause frostbite to mouth and throat. Liquid product may pose aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics	Contact with dispersed gas is not expected to cause negative effects. Contact with liquefied gas might cause frostbites, in some cases with tissue damage.
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Delayed and immediate effects and also chronic effects from short and long term exposure

Numerical measures of toxicity (such as acute toxicity estimates)

Acute toxicity	Not known.
Skin corrosion/irritation	Contact with liquefied gas might cause frostbites, in some cases with tissue damage.
Serious eye damage/eye irritation	Contact with liquefied gas might cause frostbites, in some cases with tissue damage.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Liquid product may pose aspiration hazard.
Other information	Not available.

SECTION 12. Ecotoxicological information

Toxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.
Bioaccumulative potential	
Partition coefficient n-octanol / water (log Kow)	
1,1,1,2-tetrafluoroethane	1.274
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13. Disposal considerations

Disposal methods	
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. Transport information

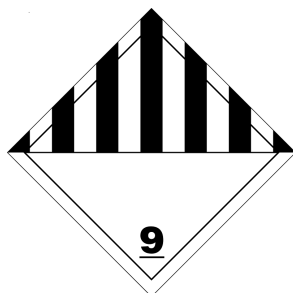
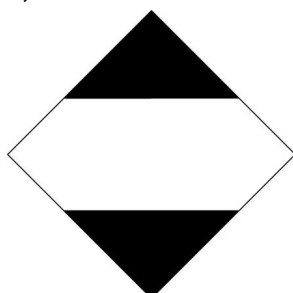
SCT	
UN number	UN1950
Proper shipping name	AEROSOLS, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Bulk special provisions	63,190,277,327,344
DOT	
UN number	None
Proper shipping name	Consumer Commodity
Transport hazard class(es)	
Class	ORM-D
Subsidiary risk	-
Packing group	Not applicable.
Special precautions for user	In accordance with this special permit, the product container is marked with DOT-SP 11644 instead of 2Q. This packaging is approved for shipping as a Consumer Commodity. Read safety instructions, SDS and emergency procedures before handling.
Special provisions	DOT-SP 11644
Packaging exceptions	156, 306
Packaging non bulk	156, 306
Packaging bulk	None
IATA	
UN number	ID8000
Proper shipping name	Consumer Commodity

Transport hazard class(es)

Class	9
Subsidiary risk	-
Packing group	Not applicable.
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1950
Proper shipping name	AEROSOLS, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

IATA**IMDG; SCT****SECTION 15. Regulatory information****Safety, health and environmental regulations specific for the hazard chemical substance or mixture in question****Mexico. Substances subject to reporting for the pollutant release and transfer registry (PRTR)**

1,1,1,2-tetrafluoroethane (CAS 811-97-2)	100 KG
	2500 KG

International regulations**Montreal Protocol**

Not applicable.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

1,1,1,2-tetrafluoroethane (CAS 811-97-2) Listed.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16. Other included information relevant to the preparation and updating of safety data sheets

Issue date 03-18-2019**Version #** 01**List of abbreviations**

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
 SCT: Secretariat of Communications and Transportation (NOM-002-SCT/2011).
 DOT: Department of Transportation (49 CFR 172.101).
 ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.
 ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road.
 IATA: International Air Transport Association.
 IMDG Code: International Maritime Dangerous Goods Code.
 MARPOL: International Convention for the Prevention of Pollution from Ships.
 IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.

References NOM-010-STPS-2014 (second revision) – Occupational Exposure Limits – becomes effective on April 28, 2016
 NOM-018-STPS-2000 – Workplace Hazardous Chemical Substances Communication and Identification Standard
 NOM-028-STPS-2012 – Work-Safety Management System for Processes and Critical Equipment Handling Hazardous Chemical Substances
 Workplace Threshold Quantities of Hazardous Chemicals
 NOM-047-SSA1-2011 – Workplace Biological Exposure Indices (BEIs) to Chemical Substances
Further information CRC # 282/1002335

Disclaimer

This information is considered accurate but is not exhaustive and shall only be used as a guideline based on current knowledge of the chemical substance or mixture. Safety precautions suitable for the product must be applied.

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's 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 (M)SDS consult your supervisor, a health & safety professional, or CRC Industrias de Mexico S. de R. L. de C.V..