

TECHNICAL DATA SHEET

Product No. 2039

Date of Issue 10 October, 2007



ACN 000 725 833

CRC Industries (Aust) Pty. Limited

PO Box 199, Castle Hill, NSW 1765.

I. Product Description

CRC Freeze Spray is an aerosol coolant system that instantly freezes surfaces to -50°C. Formulated to be non-flammable and plastic safe, **Freeze Spray's** powerful blast of propellant dissipates heat and cools circuits. By instantly chilling suspect components, it will assist in locating thermal intermittent failures and shorts. **Freeze Spray** is safe for use on sensitive components and all surface finishes. **Freeze Spray** is non-abrasive, dries instantly without residue and comes with an extension tube for precise application of the product.

II. Applications

Recommended for use as a coolant on thermal intermittents, computers, office equipment, electronics, video, audio and communication equipment, data processing equipment, circuit boards, lab equipment, clean rooms, plant machinery and more. Will also cool shafts to allow easy application of press-fit bearings.

III. Features & Benefits

- **Non-Flammable.** Significantly reduces the risk of fire caused by incidental contact with energized electrical equipment.
- **No Residue.** Instantly evaporates leaving surface clean without inhibiting electrical properties.
- **Plastic Safe.** Will not damage modern plastics used in electronics or electrical assemblies.
- **Non-Abrasive.** Will not scratch or scar any surface finish.
- **Contains No Known Ozone Depleting Chemicals.** Offers effective performance while complying with regulations on the use of ozone depleting chemicals.

IV. Physical Properties without propellant

Flash Point	Nil	Boiling Point	-26°C. Initial
Odour	Mild Ethereal	Solubility	Slight in water
Appearance	Colourless liquid	% Volatile	100
Vapour Density	3.5	Specific Gravity	1.21 @ 20°C.
Vapour Pressure	70 psig @ 20°C	Propellant	HFC 134A
Fire Point	None		

V. Specification and Approvals

Meets 1998 USDA guidelines for use in meat and poultry plants.

Performance Characteristics

ASTM D-1130 (Kauri-Butanol Value)	<10

VI. Directions

- Always read the entire label before using product.
- DO NOT SPRAY ON SKIN. Can will dispense freezing liquid which can cause frostbite on exposed skin.
- Hold can 2 to 6 inches away from item to be cooled and pull trigger. Operate in a series of short blasts.
- For more precise delivery of **Freeze Spray**, use the extension tube.

VII. Disposal

Disposal requirements vary by state and local regulations. All used and unused product should be disposed of in conformance with local, state and commonwealth laws and regulations.

VIII. Special Use Warnings**Aerosol Cans**

Do not puncture, incinerate or store above 50°C. Exposure to high temperatures may cause can to burst. Do not place in direct sunlight or near any heat source. Aerosol cans will conduct electricity. Keep away from all live electrical sources including battery terminals, solenoids, electrical panels and other electronic components. Failure to observe this warning may result in serious injury from flash fire and/or electrical shock.

General

Use only in well-ventilated area. Ventilation may be improved by opening a window or door or providing mechanical assistance. Avoid continuous breathing of vapour and spray mist. Avoid contact with the skin and eyes. If ventilation is not adequate, respiratory protection should be worn. For more information regarding short term and long term exposure, review this product's Material Safety Data Sheet.

PRODUCT WARRANTY: CRC offers a conditional warranty on this product for the period of 2 years from the date of manufacture.

DISCLAIMER: All information on this data sheet is based on testing by CRC Industries (Aust.) Pty. Ltd. All products should be tested for suitability on a particular application prior to actual use. CRC Industries (Aust.) Pty. Ltd. makes no representations or warranties of any kind concerning this data.



SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name FREEZE SPRAY

Synonym(s) 2039 - PRODUCT CODE • CRC FREEZE SPRAY • CRC FREEZE SPRAY 75 (FORMERLY)

1.2 Uses and uses advised against

Use(s) FREEZE SPRAY • FREEZING APPLICATIONS

1.3 Details of the supplier of the product

Supplier name CRC INDUSTRIES (AUST) PTY LIMITED

Address 9 Gladstone Road, Castle Hill, NSW, 2154, AUSTRALIA

Telephone (02) 9849 6700

Fax (02) 9680 4914

Email info@crcind.com.au

Website www.crcindustries.com.au

1.4 Emergency telephone number(s)

Emergency 13 11 26 (PIC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

GHS classification(s) Aerosols: Category 3

2.2 Label elements

Signal word WARNING

Pictogram(s)

None allocated.

Hazard statement(s)

H229 Pressurized container: may burst if heated.

Prevention statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P251 Pressurized container: Do not pierce or burn, even after use.

Response statement(s)

None allocated.

Storage statement(s)

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C.

Disposal statement(s)

None allocated.

2.3 Other hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
1,1,1,2-TETRAFLUOROETHANE (HFC 134A)	811-97-2	212-377-0	>60%

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator where an inhalation risk exists. Apply artificial respiration if not breathing.
Skin	Cold burns: Remove contaminated clothing and gently flush affected areas with warm water (30°C) for 15 minutes. Apply sterile dressing and treat as for a thermal burn. For large burns, immerse in warm water for 15 minutes. DO NOT apply any form of direct heat. Seek immediate medical attention.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.
First aid facilities	No information provided.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture

Non flammable. May evolve toxic gases (carbon oxides, hydrogen fluoride, hydrocarbons) when heated strongly.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

2Y
2 Fine Water Spray.
Y Risk of violent reaction or explosion. Wear full fire kit and breathing apparatus. Contain spill and run-off.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Aerosol containers may explode if exposed to excessive heat (> 50°C). Ensure containers are adequately labelled and protected from physical damage when not in use.

7.3 Specific end use(s)

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
1,1,1,2-Tetrafluoroethane	SWA (AUS)	1000	4240	--	--

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

PPE

Eye / Face	Wear splash-proof goggles.
Hands	Wear leather gloves.
Body	When using large quantities or where heavy contamination is likely, wear coveralls.
Respiratory	Where an inhalation risk exists, wear a Type A-Class P1 (Organic gases/vapours and Particulate) respirator. At high vapour levels, wear an Air-line respirator. Where the boiling point is < 65°C, use an AX filter type.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	COLOURLESS GAS (AEROSOL DISPENSED)
Odour	ETHEREAL-LIKE ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	-26.4°C
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	> 1 (Air = 1)
Specific gravity	1.212
Solubility (water)	NOT AVAILABLE
Vapour pressure	0.583 MPa @ 25°C
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE

9.1 Information on basic physical and chemical properties

Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

9.2 Other information

% Volatiles	100 %
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10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization is not expected to occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Incompatible with oxidising agents (e.g. hypochlorites), alkalis (e.g. sodium hydroxide), alkaline earth metals (e.g. manganese).

10.6 Hazardous decomposition products

May evolve toxic gases if heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Health hazard summary	Asphyxiant - narcotic. This product may present a hazard with direct eye contact, prolonged skin contact or with vapour/gas inhalation at high levels. Over exposure may result in frostbite or cold burns with direct contact. Individuals with impaired cardiovascular function, especially those with a history of cardiac arrhythmias, are advised to avoid exposure.	
Eye	Direct contact with evaporating liquid may result in cold burns, similar to frostbite injury, with possible permanent damage.	
Inhalation	Irritant - asphyxiant. Over exposure may result in respiratory irritation, coughing, nausea, dizziness and headache. High level exposure may result in dizziness, breathing difficulties and anaesthesia, cardiac arrhythmias, pulmonary oedema and unconsciousness at very high levels.	
Skin	Low irritant. Prolonged or repeated contact may result in mild irritation. However, direct contact with the liquefied material or escaping compressed gas may cause frostbite injury.	
Ingestion	Ingestion is considered unlikely due to product form.	
Toxicity data	1,1,1,2-TETRAFLUOROETHANE (HFC 134A) (811-97-2)	
	LC50 (inhalation)	1500 g/m ³ /4 hour (rat)
	TCLo (inhalation)	5000 ppm/6 hour/2 years intermittently (rat)

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No information provided.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Other adverse effects

No information provided.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal	For small amounts, absorb contents with sand or similar and dispose of to an approved landfill site. Do not puncture or incinerate aerosol cans. Contact the manufacturer/supplier for additional information (if required).
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	1950	1950	1950
14.2 Proper Shipping Name	AEROSOLS	AEROSOLS	AEROSOLS
14.3 Transport hazard class	2.2	2.2	2.2
14.4 Packing Group	None Allocated	None Allocated	None Allocated

14.5 Environmental hazards No information provided

14.6 Special precautions for user

Hazchem code	2Y
GTEPG	2D1
EMS	F-D, S-U

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Poison schedule	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
Classifications	Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals. The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].
Hazard codes	None allocated.
Risk phrases	None allocated.
Safety phrases	None allocated.
Inventory listing(s)	AUSTRALIA: AICS (Australian Inventory of Chemical Substances) All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information

ASPHYXIANTS (1): When present in the atmospheres in high concentrations, asphyxiants reduce the oxygen concentration by displacement. Atmospheres deficient in oxygen do not provide adequate sensory warning of danger and most simple asphyxiants are odourless. Therefore it is not appropriate to recommend an exposure standard for each asphyxiant, but to maintain oxygen concentrations. However, some asphyxiants may be given an exposure standard due to the potential for narcotic effects at high concentrations or an explosion hazard.

ASPHYXIANTS (2): There is a significant hazard associated with workers entering poorly ventilated areas (e.g. tanks) where oxygen may be deficient. An air supplied breathing apparatus may be required if adequate ventilation is not ensured. Refer to AS/NZS 2865 - Safe Working in a Confined Space.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m ³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (highly acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

Revision history

Revision	Description
2.0	GHS classifications provided.
1.0	Initial SDS creation

PRODUCT NAME FREEZE SPRAY

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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