



NEW ZEALAND MADE FOR THE TRADE

SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: 50 Below Freezer (250g)
Product Code: 7023
Recommended Use: Circuit Refrigerant for Electronic and Electrical Use.
Supplier: Chemz Ltd
PO Box 113
Whakatu
Hastings 4180
New Zealand
Telephone Number: +64 6 877 9690
New Zealand Poisons Centre: 0800 764 766 (0800POISON)
Australian Poisons Centre: 13 1126 (from anywhere in Australia)

2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433:2007 Transport of Dangerous Goods on Land.
Not classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001.

DG Class: 2.2 - Non-Flammable Aerosols.

Hazard and Precautionary Information:

Warning. May cause skin irritation. May be harmful if inhaled. Keep out of reach of children. Read label before use. Read Safety Data Sheet before use. No smoking. Do not spray on an open flame or other ignition source. Pressurised container: Do not pierce or burn, even after use. Protect from sunlight. Do not expose to temperatures exceeding 50 °C

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS Number	% w/w	WES TWA, ppm	WES STEL, ppm
1,1,1,2-Tetrafluoroethane	811-97-2	>60	1,000	Not Established

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (Phone New Zealand 0 800 764766) or a doctor.

Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:

If skin contact occurs, remove contaminated clothing and wash skin with running water. If irritation occurs seek medical advice.



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Eye Contact:

If in eyes, wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Ingestion:

Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek medical advice.

Medical attention and special treatment:

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Hazards from combustion products:

On burning will emit toxic fumes, including those of oxides of carbon.

Precautions for fire fighters and special protective equipment:

Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Suitable Extinguishing Media:

Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem Code: 2Y

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures:

Clear area of all unprotected personnel.

Methods and materials for containment and clean up:

In the event of an aerosol can developing a leak, allow to fully discharge in the open air before disposal. Product will evaporate leaving no residue.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid skin and eye contact and breathing in vapour, mists and aerosols. Ensure spray nozzle is always directed away from the user. Do NOT smoke. Vapour may travel a considerable distance to source of ignition and flash back.

Conditions for safe storage: Store in cool place and out of direct sunlight. Store away from sources of heat. Store away from oxidising agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: No value assigned for this specific material by the New Zealand Occupational Safety and Health Service (OSH).

However, Workplace Exposure Standard(s) for constituent(s):
134A WES-TWA 1,000 ppm

As published by the New Zealand Occupational Safety and Health Service (OSH).
No Exposure Standards assigned to other constituents.



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WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure. Asphyxiant - gases which can lead to reduction of oxygen concentration by displacement or dilution. The minimum oxygen content in air should be 18% by volume under normal atmospheric pressure.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Use in well ventilated areas.

Personal Protective Equipment:

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors. Wear clean overalls, safety boots, general purpose gloves (PVC) and safety spectacles. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. For leaking aerosol cans: Wear clean overalls, safety boots, general purpose gloves (PVC) and full face visor. If risk of inhalation exists, wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

FOR CONSUMER USE: Wear rubber gloves and eye protection while handling the product. Wash hands after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear gas spray.
Boiling Point:	-26.2°C
Can Pressure, kPa:	600 – 750
Vapour Density, (Air = 1):	> 1
Flashpoint, C:	Not Applicable
Solubility in Water:	Insoluble

10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions of use.

Conditions to avoid: The product is not flammable in air under ambient conditions of temperature and pressure. Avoid exposure to high temperature.

Incompatible materials: Incompatible with oxidising agents.

Hazardous decomposition products: This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid and possibly carbonyl fluoride. These materials are toxic and irritating. Avoid contact with decomposition products.

Hazardous reactions: Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:



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Ingestion: Swallowing can result in nausea, vomiting and central nervous system depression. If the victim is showing signs of central system depression (like those of drunkenness) there is greater likelihood of the patient breathing in vomit and causing damage to the lungs. Breathing in vomit may lead to aspiration pneumonia (inflammation of the lung).

Eye contact: May cause eye irritation. Direct contact with liquid or refrigerated gas can cause cold burns and frostbite.

Skin contact: May cause skin irritation. Direct contact with liquid or refrigerated gas can cause cold burns and frostbite. Repeated or prolonged skin contact may lead to irritant contact dermatitis.

Inhalation: Breathing in vapour can result in headaches, dizziness, drowsiness, and possible nausea. Breathing in high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness. Intentional misuse by deliberately concentrating and breathing the contents can be harmful or fatal due to cardiac effects.

Long Term Effects: No information available for the product.

Toxicological Data: No LD50 data available for the product.

Dermal and Oral toxicity: Not applicable.

Inhalation 4 h LC50: 567000 ppm, rat.

Repeated dose toxicity: Inhalation (rat), no toxicologically significant effects were found.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Avoid contaminating waterways.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Refer to Waste Management Authority. Advise flammable nature. Do not puncture or burn can when empty; contents are under pressure. If aerosol can develops a leak, allow to fully discharge before disposal. Normally suitable for disposal at approved land waste site.

14. TRANSPORT INFORMATION

Road and Rail Transport:

Classified as a Dangerous Good according to NZS 5433:2007 Transport of Dangerous Goods on Land.

UN No: 1950

Class: 2.2

Proper Shipping Name: AEROSOLS

Hazchem Code: 2Y

Marine Transport:

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No: 1950

Class: 2.2

Proper Shipping Name: AEROSOLS

Air Transport:

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No: 1950



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15. REGULATORY INFORMATION

Regulatory information specific for the substance or mixture

This substance is to be managed using the conditions specified in an applicable Group Standard.

Group Standard: HSR002518 Aerosols (Non-hazardous) Group Standard 2006

16. OTHER INFORMATION

For further copies of this sheet or other product information contact Chemz LTD.

Reason(s) for Issue:

Revised Primary MSDS

Change to Poisons Requirements

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Chemz Limited cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. If clarification or further information is needed, the user should contact their Chemz representative or Chemz Limited at the contact details on page 1. Chemz Limited's responsibility for the material as sold is subject to the terms and conditions of sale.