

SAFETY DATA SHEET

According to
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1. Identification of the material and the supplier

Product: Carbon Dioxide extinguisher
 Product Use: Fire Extinguisher
 Restriction of Use: Refer to Section 15

New Zealand Supplier: **PSL Fire & Safety**
 Address: 10 Akatea Rd,
 Glendene
 Auckland 0602

Telephone: +64 9 818 8048
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 Email: sales@pslfireandsafety.co.nz

Emergency No: 0800 764 766 (National Poison Centre)

Date of SDS: 9 November 2023

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: Fire Fighting Chemicals – HSR002573

Pictograms



Signal Word: **Warning**

GHS Category	Hazard Code	Hazard Statement
Liquefied Gas	H280	Contains gas under pressure may explode if heated.

Prevention Code	Prevention Statement
P103	Read carefully and follow all instructions.

Response Code	Response Statement
None allocated	

Storage Code	Storage Statement
P403	Store in a well-ventilated place.
P410 + P403	Protect from sunlight. Store in a well-ventilated place.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
Carbon Dioxide	>99.8	124-38-9

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical assistance if needed.
If on Skin	In case of frostbite, wash skin with plenty of water. If skin irritation occurs: get medical advice/attention.
If Swallowed	Rinse mouth. Do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a doctor/medical service if you feel unwell.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms: In high concentration the gas may cause a suffocation. Victim may not be aware of asphyxiation.

Section 5. Fire Fighting Measures

Hazard Type	The product itself does not burn. Contains gas under pressure; may explode if heated.
Hazards from decomposition products	None known.
Suitable Extinguishing media	Water spray Do not use full water jet.
Precautions for firefighters and special protective clothing	Wear self-contained breathing apparatus and chemical protective clothing. Move containers away from the fire area, if this can be done without risk. Use extinguishing media appropriate to the surrounding fire. Exposure to fire and heat can cause the gas containers to rupture. Cool exposed containers with water sprayed from a protected area. Do not allow water to drain into the gutters used in emergencies. If possible, stop the gas flow. Use spray or cloud water to lower the fumes to the ground if possible
HAZCHEM CODE	None allocated

Section 6. Accidental Release Measures

For personal protection, see section 8. Provide adequate ventilation. Try to stop the leak. Remove persons to safety. Ventilate affected area.

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Wash with plenty of water. For waste disposal, see Section 13.

Section 7. Handling and Storage**Precautions for Handling:**

- Read carefully and follow all instructions.
- Wear protective clothing as detailed in Section 8.
- The fire extinguisher is a pressure vessel that must only be opened by qualified personnel.

- Maintenance operations must be performed by qualified and entitled personnel.
- Before dismantling the unit, always check the absence of internal pressure, do not position your head above the fire extinguisher. Recover the used fire extinguishing charge for destruction by an approved die. Do not eat, drink or smoke when using this product.
- Used working clothes should not be worn outside the work area.
- When using do not eat, drink, smoke, sniff.
- Wash hands before breaks and after work.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Protect from sunlight. Store in a well-ventilated place.
- Remove all sources of ignition.
- Store away from excessive heat.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³
Carbon dioxide [124-38-9]	5000	9000	30000	54000

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

Engineering Controls

Use with good general ventilation.

Personal Protection Equipment

The following recommendations should be considered although not needed.

Eyes	Wear chemical goggles.
Hands	Use chemical resistant gloves.
Respiratory	Wear gas mask.

Section 9 Physical and Chemical Properties

Appearance	Liquid under pressure
Colour	Clear
Odour	Pleasant Odour
Odour Threshold	Not available
pH	Not available
Boiling Point	-56.6°C not determined
Melting Point	-78.5°C
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	1.52
Vapour Density	Not available
Relative Density	0.82
Solubility	Not available
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available

Decomposition Temperature	Not available
Kinematic Viscosity @ 20°C	Not available
Particle Characteristics	Not available
Log KOC	0.83

Section 10. Stability and Reactivity

Stability of Substance	Stable at normal temperatures and when used as recommended.
Possibility of hazardous reactions	None known.
Conditions to Avoid	None known.
Incompatible Materials	None known.
Hazardous Decomposition Products	Does not decompose when used for intended uses.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Not applicable.
Skin	Not applicable.
Other	In high concentrations, quickly causes circulatory failure. Symptoms are headaches, nausea and vomiting, which can lead to unconsciousness. Unlike only asphyxiating substances, carbon dioxide can cause death, even when the oxygen content is normal (20-21%). It has been found that at a content of 5%, CO ₂ can lead to an increase in the toxicity of other gases (CO, NO ₂). It has been shown that CO ₂ increases carboxy hemoglobin production or binds to hemoglobin, probably due to CO ₂ stimulating effects on the respiratory system and in the circulatory system.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Section 12. Ecotoxicological Information

This product is not hazardous to the environment.

Persistence and degradability	No data available for this product itself
Bioaccumulation	Log KOC = 0.83
Mobility in Soil	No data available for this product itself
Other adverse effects	The substance/mixture has no endocrine disrupting properties. Contains one or more greenhouse gases, not subject to Regulation (EC) 842/2006 May contribute to the greenhouse effect when discharged in large quantities.

Section 13. Disposal Considerations

Disposal Method:

Must be recycled or disposed of according to the applicable regulations.
Wastewaters may also be able to be treated on site to biodegrade (if local authority waste regulations allow) by holding in ponds and/or irrigation to ground according to quantity and contaminants other than foam.

Precautions or methods to avoid: Must not be disposed of together with household garbage. Do not allow products to reach the sewage system unless authorised by agreement with the wastewater treatment plant operator.

Section 14	Transport Information
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This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2020 and SNZ HB 5433:2021

**Road, Rail, Sea and Air Transport**

UN No	1044
Class - Primary	2.2
Proper Shipping Name	FIRE EXTINGUISHERS with compressed gas
Marine Pollutant	No
Special Provisions	If the product's individual container is below 500ml, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15	Regulatory Information
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This substance is classified as hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval Code: Fire Fighting Chemicals - HSR002573

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	Not required
Emergency Response Plan	Not required
Secondary Containment	Not required
Restriction of Use	Only use for the intended purpose.

Section 16	Other Information
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Glossary

EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact PSL Fire & Safety, if further information is required.

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