CARBON DIOXIDE (Cylinder)

SAFETY DATA SHEET **(SDS Number – PGC C042017)** **Effective Date: July 2022**

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1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product Identifier

PRODUCT NAME: Carbon Dioxide, Cylinder

SYNONYMS: Beer Gas, CO2 Compressed

1.2 Uses and uses advised against

Uses: Carbonating, Calibrating, Fire Fighting, Welding Applications

1.3 Details of the supplier of the product

Pacific Gas Pty Limited,
22-26 Cumberland Drive
Seaford, VIC, 3198
Contact Telephone: (61) 408 350 180
Email: info@pacgas.com.au

1.4 Emergency telephone number(s)

Contact Telephone: (61) 408 350 180

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

GHS classification(s) Gases Under Pressure: Liquefied gas Aquatic Toxicity (Chronic): Category 4

2.2 Label elements

Signal word: WARNING

Pictogram(s)

Hazard statement(s)

H280: Contains gas under pressure; may explode if heated

H413: May cause long lasting harmful effects to aquatic life

Prevention statement(s)

Not allocated

Response statement(s)

Non allocated

Storage Statement(s)

P410 and P403: Protect from sunlight. Store in a well-ventilated place

Disposal Statement(s)

None allocated

2.3 Other hazards

Asphyxiant, this product may displace oxygen and cause suffocation.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS No	EC Number	Percentage
Carbon Dioxide	124-38-9	204-696-9	99.9%

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

EYE CONTACT: Cold burns: Immediately flush with tepid water or with sterile saline solution. Hold eyelids apart and irrigate for 15 minutes. Seek medical attention

INHALED: Remove from exposure. If not breathing apply artificial respiration if possible using an automated oxygen resuscitator. Seek medical attention. For advice call the Poisons Information Centre on **13 11 26** or alternatively call a Doctor.

SKIN ABSORPTION: Cold burns: Remove contaminated clothing and gently flush affected areas with warm water (30°C) for 15 minutes. It is recommended that warm water is applied to clothing before removing it so as to prevent further skin damage. 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: Considered unlikely.

FIRST AIDE FACILITIES: No information provided.

4.2 Most important symptoms and effects, both acute and delayed

In high concentrations may cause asphyxiation. Symptoms may include loss of mobility / consciousness. Victim may not be aware of asphyxiation. In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination.

4.3 Immediate medical attention and special treatment needed

Treat for asphyxia

5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media:

Use water spray or fog to cool cylinders or containers in the adjacent area.

5.2 SPECIAL HAZARDS ARISING FROM SUBSTANCE OR MIXTURE:

Non flammable.

5.3 Advice for firefighters

If possible, remove cool cylinders from the path of the fire. Evacuate the area if unable to move cylinders and they are exposed to the fire. Cylinders exposed to fire should not be moved until they have cooled.

5.4 Hazchem Code

2T

2	Fine Water Spray
T	Wear full fire kit and breathing apparatus. Dilute spill and run off.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

If cylinder is leaking and you are unable to stop the leak, evacuate personnel from the area. Contact your gas supplier for expert advice. Use of PPE as detailed in Section 8.

6.2 Environmental precautions

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.3 Methods of cleaning up

Carefully move material to a well ventilated remote area, then allow gas to escape to atmosphere. Do not attempt to repair leaking valve or cylinder safety devices.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Use of safe work practices to avoid inhalation. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for

cylinder movement. Only use gas regulators / equipment suitable for the cylinder gas type and working pressure. Close the cylinder valve after each use.

7.2 Conditions for safe storage, including any incompatibilities

Store and use with adequate ventilation in a secure area; below 45°C, in an area constructed of non-combustible material with firm level floor. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling or being knocked over. There should be no sources of ignition in the area.

7.3 Specific end use(s)

No information provided

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient	Reference	TWA		STEL	
		ppm	mg/m³	ppm	mg/m³
Carbon Dioxide	SWA (AUS)	5000	9000	30000	54000

Biological limits

No biological limit values have been entered for this product

8.2 Exposure controls

Provide adequate natural or explosion-proof mechanical ventilation to minimize or eliminate exposure. Confined areas (e.g. tanks) should be adequately ventilated or gas tested.

PPE

Eye / Face	safety glasses
Hands Wear	Chemical resistant impervious gloves
Body Wear	appropriate safety boots
Respiratory	If in a confined area, use an air purifying or air fed respirator complying with an approved standard

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Colourless gas, Liquified under pressure
ODOUR Odour	Odourless
Flammability	Non Flammable
Flash point	Not relevant
Boiling point	-78.5°C
Melting point	-56.6°C
Evaporation rate	IMMEDIATE
pH	Not Applicable
Vapour density	1.53 (Air = 1)
Specific gravity	1.02
Solubility (water)	Slightly soluble
Vapour pressure	5700 kPa @ 20°C
Upper explosion limit	Not relevant
Lower explosion limit	Not relevant
Partition coefficient	Not Available
Autoignition temperature	Not Available
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%

10. STABILITY AND REACTIVITY

10.1 Reactivity

No specific test data related to reactivity for this product is available. It is important to carefully review all information provided below.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions
Hazardous reactions will not occur under normal conditions of storage.
10.4 Conditions to avoid
Avoid shock, friction, heavy impact and heat sources.
10.5 Incompatible materials
Compatible with most commonly used materials.

10.6 Hazardous decomposition products
This material will not decompose to form a hazardous product other than that already present.

11. TOXICOLOGICAL INFORMATION

Ingredient	Inhalation Toxicity (LC50)
Carbon Dioxide	470000 ppm/30M (rat)

11.1 Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met. Low concentrations of carbon dioxide cause increased respiration and headache
Skin	Not irritating to the skin
Eye	Not irritating to the eye
Sensitisation	Not classified as causing skin or respiratory sensitisation
Mutagenicity	No significant ingredient is classified as a mutagen
Carcinogenicity	No significant ingredient is classified as a as a carcinogen
Reproductive	No significant ingredient is classified as a a reproductive toxin
STOT – single exposure	Asphyxiant. Effects are proportional to oxygen displacement. Over exposure may result in dizziness, drowsiness, weakness, fatigue, breathing difficulties and unconsciousness.
STOT – repeated exposure	Not classified as causing organ damage from repeated exposure
Aspiration	Not classified as causing aspiration

12. ECOLOGICAL INFORMATION
12.1 Toxicity
Not available.
12.2 Persistence and degradability
Not available
12.3 Bioaccumulative potential
Not available
12.4 Mobility in soil
No information provided.
12.5 Other adverse effects
Product is not harmful to the environment

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Waste disposal: Do not attempt to dispose of residual or unused quantities. Return cylinder to supplier. Unserviceable cylinders should be returned to the supplier for safe and proper disposal.
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)
UN Number	1013	1013	1013
Proper Shipping Name	Carbon Dioxide	Carbon Dioxide	Carbon Dioxide
Transport Hazard Class	2.2	2.2	2.2
Packing Group	None allocated	None allocated	None allocated

14.5 Environmental hazards
No information provided.

14.6 Special precautions for user

Hazchem code: 2T
GTEPG: 2C2
EMS: F-C, S-V

Other information: Cylinders should be transported in a secure position, in a well ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards and should be discouraged.

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	N	Dangerous for the environment
Risk Phrases	R58	May cause long term adverse effects in the environment
Safety Phrases	S2 S3 S9 S36 S38	Keep out of reach of children Keep in a cool place Keep container in a well ventilated place. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment
Inventory Listings	AUSTRALIA: AICS (Australian Inventory of Chemical Substances) All components are listed on AICS, or are exempt	

16. OTHER INFORMATION

Other Information	**Application method:** Never open an argon cylinder valve without the regulator attached. Use only a gas regulator of suitable pressure and flow rating fitted to cylinder.
	PERSONAL PROTECTIVE EQUIPMENT GUIDELINES: The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, 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: form of product; 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 report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

INFORMATION PREPARED BY:
Pacific Gas Pty Limited,
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