

Section 1: Identification of the substance / mixture and of the Company

1.1	Identification of the substance or mixture
IUPAC name	CARBON DIOXIDE
Synonym	CO2
CAS n°	124-38-9
EINECS n°	204-696-9
1.2	Use of the substance/ mixture
Food additive (E290) to charge / refrigerate drinks with gas	
CO2 enrichment for aquariums	
Technical gas – industrial use	
1.3	Company identification
Corporate name	Billi Australia Pty Ltd
Address, City	Warehouse 1/ 21-35 Radford Road, Reservoir
Region and Country	Victoria Australia, 3073
Phone Number	+61 9469 0400
Email Address	service@billi.com.au

Section 2: Classification of the substance or mixture

2.1	Classification of the substance or mixture
Classification under (EC) Regulations N° 1272/2008:	GAS UNDER PRESSURE - PRESSURIZED GAS
Classification under Directive N° 67/548/CEE:	PRODUCT NOT CLASSIFIED AS DANGEROUS
Free from the recording obligation according to the enclosures IV and V of the (EC) regulation nr. 1907/2006 (REACH)	
2.2	Label elements

GHS Danger Symbols :



GHS04

Signal Word:

Warning

Hazard Statements

H280: Contains gas under pressure; may explode if heated

Storage Statements

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

Danger symbols under the Directive no. 67/578/CEE:

None

"R" Phrases:

None

"S" Phrases:

None



Label No 2.2: Carbon dioxide is a non-flammable, non-toxic gas

2.3	Danger identification
At high concentration, may cause suffocation.	

Section 3: Composition/ information on ingredients

3.1	Substance			
	IUPAC name	CAS n°	EINECS n°	Concentration
	Carbon dioxide	124-38-9	204-696-9	≥ 99,99%

Carbon dioxide does not contain other products and / or impurities that can modify its classification

Section 4: First aid measures

4.1	Description of first aid measures
Immediately seek medical advice.	
Wearing breathing apparatus, move the exposed individual from the exposure to fresh air and keep warm expanses.	
If unconscious, loose clothes and lay down on one side.	
If the patient is experiencing breathing difficulties, give oxygen under low pressure.	
If the patient is not breathing, give artificial respiration. In case of cardiac arrest, carry out a heart massage.	
4.2	Most important symptoms and effects, both acute and delayed
SKIN CONTACT: In case of lesions due to low temperature, please refer to below instructions:	
Immediately remove the contaminated clothes.	
Do not rub the skin burn or break blisters.	
Put the burned body parts in the lukewarm water (40°C).	
In case of burn of your fingers and/or hands, if it is possible, separate them with strips of gauze or clean clothes.	

	Safety Data Sheet		Billi Australia Pty Ltd Address: Warehouse 1 / 21-35 Radford Road Reservoir, Victoria Australia, 3073 Contact: +61 9469 0400 Email: service@billi.com.au Revision: No. 07 Date of Revision: 07/05/2026 Next Revision due: 07/05/2031
	CARBON DIOXIDE (CO2) Carbon dioxide is a non-flammable, non-toxic gas		
Section 4 Continued			
EYE CONTACT: Immediately wash down for at least 15 minutes. Immediately seek medical advice. INHALATION: In case of illness or suffocation symptoms, move the injured person away from the accident site to a ventilated place. Immediately call a doctor. In high concentrations may cause asphyxiation. Symptoms may be loss of mobility and consciousness. Victims may not be aware. At low concentrations may cause narcotic effects, symptoms may include dizziness, headache, nausea and loss of coordination. The use of masks with filters is not effective.			
Section 5: Firefighting measures			
5.1	Extinguishing media All known extinguishing media can be used.		
5.2	Special hazards arising from the substance or mixtures Fire exposure can cause an explosion or a burst of the cylinder.		
5.3	Special protection devices Use the breathing apparatus in confined space.		
5.4	Advice for firefighters Cool the cylinder with water from a protected position. Equipment: Wear complete equipment with eye shield helmet and neck protection, pressure or demand breathing apparatus		
Section 6: Accidental release measures			
6.1	Personal precautions, protective equipment and emergency procedures Use the breathing apparatus to enter the concerned area. Evacuate the area and ensure proper ventilation. Wear protective equipment to avoid skin and eye contact or inhalation. If the release is in a small area with poor ventilation, it may cause suffocation. Wear breathing apparatus.		
6.2	Environmental precautions Prevent it from entering sewers, basements, excavations and workpits where accumulations can be dangerous.		
6.3	Methods and material for containment and clearing up If the loss is in confined area with poor ventilation, it could cause suffocation, otherwise no other procedures are necessary.		
Section 7: Handling and storage			
7.1	Precautions for safe handling Avoid direct contact with the product. Do not eat, drink or smoke in the working areas or plants. For container handling, use proper personal protective equipment such as safety shoes and gloves. Carefully handle the containers, thus avoiding violent collisions between them or against other surfaces, as well as falls and other mechanical strains susceptible to damage their integrity / resistance. Do not allow backflow into the cylinder. Do not completely empty the cylinder. In case of doubt, please contact your supplier.		
7.2	Conditions for safe storage, including any incompatibilities Gas containers cannot be directly exposed to sunshine, nor be close to heat sources or in places where temperature is above 50°C. Ensure proper ventilation (natural or forced) where carbon dioxide is stored and/or used.		
Section 8: Exposure controls/personal protection			
8.1	Control parameters Carbon dioxide: threshold values TLV-TWA: 5000 ppm - [ACGIH 2003] 		

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	CARBON DIOXIDE	
Section 9: Physical and chemical properties		
9.1	Information on basic physical and chemical properties	
	Molecular weight	44 g/mole
	Melting point	-78,5 °C
	Boiling point	-56,6 °C
	Critical temperature	31 °C
	Relative density, gas (air=1)	1,52
	Relative density, liquid (water=1)	1,03
	20°C Vapour pressure	57,3 bar
	Solubility in water (mg/l)	2000 (15 °C; 1,013 bar)
	Colour	colourless
	Odour	No odour warning properties
	Auto-ignition temperature	not applicable
	Ignition limit (% vol. in air)	not applicable
	Solubility in other solvents	not applicable
	Partition coefficient: n-octane-water	not applicable
	Other information	Gas/vapour heavier than air. May accumulate in confined areas, particularly at ground or below ground level.
9.2	Other information	
	Carbon dioxide (CO2) in gas is about 1.5 times heavier than the air and it tends to stratify down with the possibility to accumulate itself in pits, cellars and holes in the ground. In stagnant conditions CO2 accumulations can persists for many hours.	
Section 10: Stability and reactivity		
10.1	Reactivity	
	The product is reactive with some substances, for example: ammonia or amines.	
10.2	Chemical stability	
	Stable under normal use and storage conditions.	
10.3	Possibility of hazardous reactions	
	CO2 in water forms carbonic acid (H2CO3) which is a slightly acid and is corrosive to carbon steel and some non-ferrous materials.	
10.4	Conditions to avoid	
	Avoid the storage of the product in confined areas	
10.5	Incompatible materials	
	None	
10.6	Hazardous decomposition products	
	None	
Section 11: Toxicological information		
11.1	Information on toxicological effects	
	There are no known toxicological effects from this product. The substance forms under-oxygenated atmospheres. You can have health problems if you breathe air containing more than 5000 ppm (0.5%) of CO2 for more than 8 hours. If the concentration increases up to 15000 ppm (1.5%) problems appear after just 10 minutes. At 2% of concentration, you may experience headaches and loss of concentration. At higher levels, around 10%, the CO2 can cause asphyxiation and paralysis of the respiratory centers. Air richer in carbon dioxide can cause immediate loss of consciousness and death.	
	Some symptoms of asphyxiation may include rapid breathing, fatigue, nausea, vomiting and cyanosis.	
Section 12: Ecological information		
12.1	Persistence and degradability	
	No data available.	
12.2	Bio-accumulative potential	
	Low	
12.3	Mobility in soil	
	No data available.	
12.4	Results of PBT and vPvB assessment	
	A chemical safety report was not requested	
12.5	Other adverse effects	
	Carbon dioxide (CO2) is the main cause of the accelerated greenhouse effect	

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	CARBON DIOXIDE									
Section 12: Ecological information continued										
12.6 Toxicity										
Test	Area	Organism test	Taxonomic group	Toxicological Endpoint	Value mg/l	Test time	Method	GLP	Year	Substance test
Acute/Protract	Water	Trout	Fish	LC0	240	1 h	-	No	1984	Substance according to par. 1.1 -1.4 of IUCLID dossier
Acute/Protract	Water	Trout	Fish	LC0	60-240	12 h	-	No	1984	Substance according to par. 1.1 -1.4 of IUCLID dossier
Acute/Protract	Water	Trout	Fish	LC0	35	96 h	-	No	1984	Substance according to par. 1.1 -1.4 of IUCLID dossier
Section 13: Disposal considerations										
13.1 Waste treatment methods Waste treatment methods have to be verified with reference to the waste composition, National and EC standards in force. For handling and precautions in case of accidental waste, please refer to points 6 and 7. Actions or precautions must be verified according to the waste composition.										
Section 14: Transport information										
14.1 UN number UN 1013										
14.2 UN proper shipping name CARBON DIOXIDE										
14.3 Transport hazard class 2										
14.3 Label 2.2										
14.4 Packing group Not applicable										
14.5 Sea transport EMS: F-C, S-V Proper Shipping name: Carbon dioxide										
14.6 Air transport Cargo Packaging instruction: 200 Max. quantity: 150kg Passenger Packaging instruction: 200, Max. quantity: 50kg ERG Code: 2L										
14.7 Environmental hazards Not applicable										
14.8 Special precautions for users Avoid transport on vehicles where the loading area is not separated from the cabin or does not have ventilation. Assure that the driver knows the potential dangers of the loading and is able to operate in case of emergency.										
14.9 Transport in bulk according to Annex II of MARPOL 73/78 and IBC code Not applicable										
Section 15: Regulatory information										
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Ensure all National/local regulations are observed.										
15.2 Chemical safety assessment A chemical safety report was not requested.										
Section 16: Other information										
GENERAL BIBLIOGRAPHY: (EC) Regulation no. 1907/2006 of the European Parliament (REACH) (EC) Regulation no. 1272/2008 of the European Parliament (CLP) - The Merck Index. Ed. 10 - Handling Chemical Safety - Niosh - Registry of Toxic Effects of Chemical Substances - INRS - Fiche Toxicologique - Patty - Industrial Hygiene and Toxicology - N.I. Sax - Dangerous properties of Industrial Materials-7 Ed., 1989										
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