Safety Data Sheet
according to WHS Regulations

Printing date 20.01.2022 Revision: 20.01.2022

1 Identification

Product Name: CARBON DIOXIDE

Recommended Use of the Chemical and Restriction on Use: Food industry

Details of Manufacturer or Importer:
Tesuco Pty Limited
Unit 12
110-120 Silverwater Road,
Silverwater NSW 2128

Phone Number: +61 2 9737 9937

Emergency telephone number: National Poison Information Centre: 13 11 26

2 Hazard(s) Identification

Hazardous Nature:
Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.
Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).


gas cylinder

Gases Under Pressure (Liquefied gas) H280 Contains gas under pressure; may explode if heated.

Signal Word Warning

Hazard Statements
H280 Contains gas under pressure; may explode if heated.

Precautionary Statements
P410+P403 Protect from sunlight. Store in a well-ventilated place.

3 Composition and Information on Ingredients

Chemical Characterization: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Hazardous Components:			
124-38-9	Carbon dioxide	Gases Under Pressure (Liquefied gas), H280	≥99.99%

4 First Aid Measures

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if breathing problems develop.

Skin Contact:
In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. In case of lesions due to low temperature, do not rub the skin or break blisters. Place the effected body parts in lukewarm water. Seek medical attention.

Eye Contact:
In case of eye contact, hold eyelids open and rinse with water for at least 15 minutes. Seek medical attention if symptoms occur.

Ingestion: Ingestion is not considered a potential route of exposure.

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Symptoms Caused by Exposure:
Inhalation: Low concentrations may cause rapid breathing, cyanosis and narcotic effects including dizziness, headaches, nausea, vomiting and incoordination. May cause asphyxiation in high concentrations. Symptoms may include loss of mobility and unconciousness. Victims may not be aware of asphyxiation.
Skin Contact: Contact with skin may cause frostbite.
Eye Contact: Contact with eyes may cause cold burns.

5 Fire Fighting Measures

Suitable Extinguishing Media: Water spray or fog. Do not use water jet.

Specific Hazards Arising from the Chemical:
Closed containers may explode when exposed to extreme heat. Containers close to fire should be removed if safe to do so. Use water spray to cool fire exposed containers.

Special Protective Equipment and Precautions for Fire Fighters:
When fighting a major fire wear self-contained breathing apparatus and protective equipment.

6 Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:
Wear approved self-contained breathing apparatus and full protective clothing. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation.

Environmental Precautions:
In the event of a major spill, prevent spillage from entering drains or water courses.

Methods and Materials for Containment and Cleaning Up:
Ensure adequate ventilation. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

7 Handling and Storage

Precautions for Safe Handling:
Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Use only outdoors or in a well-ventilated area.
Only experienced and properly instructed persons should handle gases under pressure. Never attempt to transfer gases from one cylinder/container to another.
Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:
Store in a cool, dry and well ventilated area. Protect from direct sunlight. Do not expose to temperatures exceeding 50 °C. Ensure adequate ventilation. away from combustible materials, ammonia and amines. Do not allow backfeed into the cylinder. Do not allow suck back of water into the cylinder. Do not completely empty the cylinder. Take care when handling containers to avoid physical damage to the cylinder. Never attempt to repair or modify container valves or safety relief devices.

8 Exposure controls and personal protection

Exposure Standards:	
124-38-9 Carbon dioxide	
NES	STEL: 54000 mg/m³, 30000 ppm TWA: 9000 *22500 mg/m³, 5000 *12500 ppm *in coal mines

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Engineering Controls:
Maintain air concentration below occupational exposure standards, providing adequate ventilation.

Respiratory Protection:
Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres. See Australian Standards AS/NZS 1715 and 1716 for more information.

Skin Protection:
Working, leather gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information.
Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

Eye and Face Protection:
Eye and face protectors for protection against gas. See Australian/New Zealand Standard AS/NZS 1337.

9 Physical and Chemical Properties

Appearance:	
Form:	Compressed gas
Colour:	Colourless
Odour:	Odourless
Odour Threshold:	Not applicable
pH-Value:	Not applicable
Melting point/freezing point:	-78.5 °C (sublimation point)
Initial Boiling Point/Boiling Range:	-56.6 °C
Flash Point:	Not applicable
Flammability:	Product is not flammable.
Auto-ignition Temperature:	Not applicable
Decomposition Temperature:	No information available
Explosion Limits:	
Lower:	No information available
Upper:	No information available
Vapour Pressure at 20 °C:	57.3 bar
Relative Density:	1.03
Vapour Density:	1.52
Evaporation Rate:	No information available
Solubility in Water at 15 °C:	2000 mg/L (at 1.013 bar)
Partition Coefficient (n-octanol/water):	0.83 log Kow
Viscosity:	Not applicable

10 Stability and Reactivity

Possibility of Hazardous Reactions: No hazardous reactions will occur.

Chemical Stability: Stable at ambient temperature and under normal conditions of use.

Conditions to Avoid: Extreme temperatures.

Incompatible Materials: This product may react with some substances, such as ammonia or amines.

Hazardous Decomposition Products: No hazardous decomposition products known.

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11 Toxicological Information

Toxicity:
LD_{50}/LC_{50} Values Relevant for Classification: No information available

Acute Health Effects
Inhalation:
Low concentrations may cause rapid breathing, cyanosis and narcotic effects including dizziness, headaches, nausea, vomiting and incoordination. May cause asphyxiation in high concentrations. Symptoms may include loss of mobility and unconciousness. Victims may not be aware of asphyxiation.
Skin: Contact with skin may cause cold burns.
Eye: Contact with eyes may cause cold burns.
Ingestion: Ingestion is not considered a potential route of exposure.

Skin Corrosion / Irritation: Based on classification principles, the classification criteria are not met.

Serious Eye Damage / Irritation: Based on classification principles, the classification criteria are not met.

Respiratory or Skin Sensitisation: Based on classification principles, the classification criteria are not met.

Germ Cell Mutagenicity: Based on classification principles, the classification criteria are not met.

Carcinogenicity: This product does NOT contain any IARC listed chemicals.

Reproductive Toxicity: Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Single Exposure:
Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:
Based on classification principles, the classification criteria are not met.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.

Chronic Health Effects: No information available

Existing Conditions Aggravated by Exposure: No information available

Additional toxicological information:
Concentrations of 5000 ppm in air can cause health problems after 8 hours of exposure.
Concentrations of 15000 ppm can cause problems in 10 minutes.
Concentrations greater than 20000 ppm can cause headaches and loss of concentration. Concentrations greater than 10 % in air can cause asphyxiation and respiratory paralysis. Higher concenrtations of carbon dioxide can cause immediate loss of consciousness and death.

12 Ecological Information

Ecotoxicity: No adverse ecological effects are expected.

Aquatic toxicity: This product has no known eco-toxicological effects.

Persistence and Degradability: Not applicable

Bioaccumulative Potential: This product has a low bioaccumulative potential.

Mobility in Soil: No information available
Other adverse effects: Carbon dioxide is a major contributor to the greenhouse effect.

13 Disposal considerations

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.

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Special Precautions for Landfill or Incineration:
Please consult your state Land Waste Management Authority for more information.

14 Transport information

UN Number
ADG, IMDG, IATA UN1013

Proper Shipping Name
ADG, IMDG, IATA CARBON DIOXIDE

Dangerous Goods Class
ADG Class: 2.2

Packing Group:
ADG, IMDG, IATA Void

EMS Number: F-C,S-V

Hazchem Code: 2T

Limited Quantities: 120 ml

Packagings & IBCs - Packing Instruction: P200

15 Regulatory information

Australian Inventory of Chemical Substances:	
124-38-9	Carbon dioxide

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:
Not Scheduled.

16 Other information

Date of Preparation or Last Revision: 06.03.2017

Prepared by: MSDS.COM.AU Pty Ltd www.msds.com.au

Abbreviations and acronyms:
ADG: Australian Dangerous Goods
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC_{50}: Lethal concentration, 50 percent
LD_{50}: Lethal dose, 50 percent
IARC: International Agency for Research on Cancer
STEL: Short Term Exposure Limit
TWA: Time Weighted Average
NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)
Gases Under Pressure (Liquefied gas): Gases under pressure – Liquefied gas

Disclaimer
This SDS is prepared in accord with the Safe Work Australia document “Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - February 2016”
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