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

Product Name: CARBON DIOXIDE (COMPRESSED)
Chemical formula: CO_2
UN Number: UN1013
Uses: Industrial and Professional. Perform risk assessment prior to use.
Contact Supplier for more information.

Company Identification:
Gaz Carbonique Ltée
Lot 1, Ground Floor, Le Hub,
DBM Industrial Zone, Phoenix
Mauritius - Indian Ocean
Tel: (230) 603 2992
Fax: (230) 696 5973
Email: contact@gazcarbo.mu

Contact Person:
Mr. Arnaud Rougier Lagane
Chief Operating Manager

Section 2. Hazards Identification

Classification of the substance or mixture
Gases under pressure - Compressed gas - Warning - (CLP: Press. Gas) H280

Classification EC 67/548 or EC 1999/45
Not classified as dangerous substance/mixture.
Not included in Annex VI.
No EC labelling required.

Label Elements
Hazard Pictograms

Hazard pictograms code: GHS04
Signal word: Warning
Hazard Statement: H280 - Contains gas under pressure; may explode if heated.
Precautionary Statements
- Storage: P403 - Store in a well-ventilated place

Other Hazards
Asphyxiant in high concentrations.
Contact with liquid may cause cold burns/frostbite.

Section 3. Composition/Information on Ingredients

Substance/Mixture : Substance
Substance Name: Carbon Dioxide.
CAS NO.: 124-38-9
Index-Nr.: ----
EC No: 204-696-9

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Section 3. Composition/Information on Ingredients (continued)

Contains no other components or impurities which will influence the classification of the product.

REACH Registration Number: Listed in Annex IV/V REACH, exempted from registration.
Registration deadline not expired
Registration not required: Substance manufactured or imported < 1t/y

Full text of R-phrases; see chapter 16. Full text of H-statements; see chapter 16

Section 4. First Aid measures

Inhalation
Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

Skin/Eye contact
In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance. Immediately flush eyes thoroughly with water for at least 15 minutes.

Ingestion
Ingestion is not considered a potential route of exposure.

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. Low concentrations of CO_2 cause increased respiration and headache.

Section 5. Fire Fighting Measures

Special extinguishing media
All known extinguishants can be used

Specific Hazards
Exposure to fire may cause containers to rupture/explode. Non-flammable.

Hazardous combustion products
None.

Specific methods
Coordinate fire measure to the surrounding fire.
Cool endangered containers with water spray jet from a protected position.
Do not empty contaminated fire water into drains. If possible, stop flow of products.

Special protective equipment for fire fighters
In confined space use self-contained breathing apparatus.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Try to stop release. Evacuate area.
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
Ensure adequate air ventilation.
Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

Environmental precautions
Try to stop release.

Clean up methods
Ventilate area.

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Section 7. Handling and Storage

Safe Use of the product
Only experienced and properly instructed persons should handle gases under pressure.
The product must be handled in accordance with good industrial hygiene and safety procedures.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Do not smoke while handling product.
Ensure the complete gas system was (or is regularly) checks for leaks before use.
Avoid suck back water, acid and alkalis.

Safe handling of the gas receptacle
Refer to supplier's container handling instructions prior to use.
Do not allow back feed into the container.
Protect cylinders from physical damage; do not drag, roll, slide or drop.
Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use.
If user experiences any difficulty operating cylinder valve discontinue use and contact supplier.
Never attempt to repair or modify container valves or safety relief devices.
Damage valves should be reported immediately to the supplier.
Keep container valve outlets clean and free form contaminates particularly oil and water.
Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment.
Close container valve after each use and when empty, even if still connected to equipment.
Never attempt to transfer gases from one cylinder to another.
Never use direct flame or electrical heating devices to raise the pressure of a container.
Do not remove or deface labels provided by the supplier for the identification of the cylinder contents.

Conditions for safe storage
Keep container below 50°C in a well-ventilated place.
Containers should be stored in the vertical position and properly secured to prevent toppling.
Stored containers should be periodically checked for general condition and leakage.
Container valve guards and caps should be in place.
Stored containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible materials.
Observe all regulations and local requirements regarding storage of containers.
Containers should not be stored in conditions likely to encourage corrosion.

Section 8. Exposure Controls/Personal Protection

Exposure controls
Oxygen detectors should be used when asphyxiating gases may be released.
Consider work permit system e.g. for maintenance activities.
System under pressure should be regularly checked for leakages.
Ensure exposure is below occupational exposure limits (where available).
Provide adequate general and local exhaust ventilation.

Personal protection
Conduct and document risk assessment in each work area to assess the risks related to the use of the product and to select the appropriate PPEs.
Wear leather safety gloves and safety shoes when handling cylinders.
Wear safety glasses with side shields or goggles when transferring or breaking transfer connections.
Ensure adequate ventilation. Protect eyes, face and skin from liquid splashes.

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Section 8. Exposure Controls/Personal Protection (continued)

Environmental exposure controls
None

Section 9. Physical and Chemical Properties

General Information
Appearance

- Physical state at 20◦C / 101.3 kPa:	Gas.
- Colour:	Colourless.
Odour:	No odour warning properties.
Odour threshold:	Odour threshold is subjective and inadequate to warn for overexposure.
Molar mass:	44
Melting point (◦C):	-56,6
Boiling point (◦C):	-78,5 (s)
Critical temperature (◦C):	30
Flash point (◦C):	Not applicable for gases and gas-mixtures
Evaporation rate (ether=1):	Not applicable for gases and gas-mixtures
Auto-ignition temperature (◦C):	Not applicable
Flammability range (vol% in air):	Non-flammable
Vapour pressure (20◦):	57.3 bar
Relative density, gas (air=1):	1.52
Relative density, liquid (water=1):	0.82
Solubility in water (mg/l):	2000 completely soluble.
Partition coefficient n-octanol/water:	0.83

Other data:
Gas/vapour heavier than air.
May accumulate in confined spaces, particularly at or below ground level.

Section 10. Stability and reactivity

Reactivity
No reactivity hazard other than the effects described in sub-sections below.
Chemical stability
Stable under normal conditions.
Possibility of hazardous reactions
None
Conditions to avoid
None under recommended storage and handling conditions (see section 7)
Hazardous decomposition products
None

Section 11. Toxicological Information

General
No known effects of this product.

Acute toxicity
In high concentrations cause rapid circulatory insufficiency even at normal levels of oxygen concentration.
Symptoms are headache, nausea and vomiting, which may lead to unconsciousness and death.

Section 12. Ecological Information

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General
When discharged in large quantities may contribute to the greenhouse effect.

Section 13. Disposal Considerations

General
May be vented to atmosphere in a well-ventilated place.
Do not discharge into any place where its accumulation could be dangerous.
Discharge to atmosphere in large quantities should be avoided.

Section 14. Transport Information

UN number : 1013
UN Proper Shipping Name: CARBON DIOXIDE

Labelling ADR, IMDG, IATA:

2.2: Non-flammable, non-toxic gas.

Land Transport (ADR/RID)

Hazard number:		20
Transport hazard class(es):		2
Classification code:		2 A
Packing instruction(s):	P200	
Environmental hazards:		None

Sea Transport (IMDG)

Class:		2.2
Packing Instruction/group:	P200	
Emergency Schedule (EmS) Fire:		F-C
Emergency Schedule (EmS) Spillage:		S-V

Air Transport (IATA-DGR, ICAO-TI)

Class:	2.2
Passenger and Cargo Aircraft:	Allowed
Packing Instruction - Passenger and Cargo Aircraft:	200
Packing Instruction - Cargo Aircraft only:	200

Special precautions for user
Avoid transport on vehicles where the load space is not separated from the driver's compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.
Before transporting product containers:
- Ensure there is adequate ventilation.
- Ensure that they are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure that the valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure compliance with applicable regulations.

Section 15. Regulatory Information

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EU legislation:	None
National legislation:	Ensure all national/local regulations are observed.

Section 16. Other Information

List of full text of H-statements in section 3:	H280 - Contains gas under pressure; may explode if heated.
DISCLAIMER OF LIABILITY:	Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted. Details given in this document are believed to be correct at the time of going to press. Before using this product, a thorough material compatibility and safety study should be carried out. This MSDS was prepared and is to used only for this product.

End of document.

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