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

Product Name: Acetylene (dissolved)
Chemical formula: C_2H_2
Uses: Industrial and Professional. Perform risk assessment prior to use.
Contact Supplier for more information on uses.

Company Identification:
Gaz Carbonique Limitée
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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
Physical Hazards - Gases under pressure - H280
Chemically unstable gases, Category A – H230
Flammable gases, Category 1 - H220

Label Elements
Hazard Pictograms

Hazard pictograms code: GHS04 - GHS02
Signal word: Danger
Hazard Statement: H220 - Extremely flammable gas.
H280 - Contains gas under pressure; may explode if heated.
H230 – May react explosively even in the absence of air

Precautionary Statements
Prevention: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P202 – Do not handle until all safety precautions have been read and understood
Response: P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - Eliminate all ignition sources if safe to do so.
Storage: P403 - Store in a well-ventilated place

Other Hazards: None

Section 3. Composition/Information on Ingredients

Substance/Mixture: Substance
Mixture Name: Acetylene (dissolved)
CAS NO.: 74-86-2
EC Index-Nr.: 601-015-00-0
EC No: 200-816-9
REACH No: 01-2119457406-36

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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 contact
For liquid spillage - flush with water for at least 15 minutes
Eye contact
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.

Section 5. Fire Fighting Measures

Special extinguishing media

- Suitable extinguishing media:	Water spray or fog
	Dry Powder
- Unsuitable extinguishing media:	Carbon Dioxide
	Do not use water jet to extinguish

Specific Hazards
Exposure to fire may cause containers to rupture/explode.
Hazardous combustion products
Incomplete combustion may form carbon monoxide.
Specific methods
Use fire control measures appropriate for the surrounding fire.
Exposure to fire and heat radiation may cause gas receptacles to rupture.
Cool endangered receptacles with water spray jet from a protected position.
Prevent water used in emergency cases from entering sewers and drainage systems.
If possible, stop flow of product
Use water spray or fog to knock down fire fumes if possible
Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur.
Extinguish any other fire
Move containers away from the fire area if possible to do so without risk
Special protective equipment for fire fighters
In confined space use self-contained breathing apparatus.
Standard EN137 - Self-contained open-circuit compressed air breathing apparatus with full face mask
Standard EN469 - Protective clothing for firefighters.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Try to stop release. Evacuate area.
Consider the risk of potentially explosive atmospheres
Eliminate ignition sources
Ensure adequate air ventilation.
Act in accordance with local emergency plan
Stay upwind

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Section 6. Accidental Release Measures (continued)

Environmental precautions
Try to stop release.
Clean up methods
Ventilate area.

Section 7. Handling and Storage

Safe Use of the product
The substance must be handled in accordance with good industrial hygiene and safety procedures.
Only experienced and properly instructed persons should handle gases under pressure.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Consider pressure relief device(s) in gas installations.
Do not smoke while handling product.
Ensure the complete gas system was (or is regularly) checks for leaks before use.
Protect eyes, face and skin from liquid splashes.
Assess the risk of potentially explosive atmospheres and the need for explosion-roof equipment.
Purge air from system before introducing gas
Take precautionary measure against static discharge
Keep away from ignition sources (including static discharge)
Consider the use of non-sparkling tools
Do not breathe gas
Avoid release of product into atmosphere.
Avoid contact with pure copper, mercury, silver and brass with greater than 65% copper.
Consider the use of flash back arrestors
Solvent may accumulate in piping systems. For maintenance activities, use appropriate resistant gloves, assess the necessity to use a respiratory filter device and wear safety goggles. Avoid breathing the vapour of the solvent. Provide adequate ventilation.
For more guidance on safe use, refer to EIGA Doc. 212
Ensure equipment is adequately earthed.

Safe handling of the gas receptacle
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 contaminants 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.
When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders.

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 them from falling over.

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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 7. Handling and Storage (continued)

Segregate from oxidant gases and other oxidants in store.
All electrical equipment in the storage areas should be compatible with the risk of a potentially explosive atmosphere.

Section 8. Exposure Controls/Personal Protection

Control Parameters
Simple asphyxiant

Exposure controls
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.
Keep concentrations well below lower explosion limits
Gas detectors should be used when flammable gases/vapours may be released.

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. The following recommendations should be considered:
PPE compliant to the recommended EN/ISO standards should be selected

Eye/face protection:	Wear safety glasses with side shields Wear goggles and a face shield when transfilling or breaking transfer connections
Skin protection:	Wear working gloves when handling gas containers Consider the use of flame resistant anti-static safety clothing Wear safety shoes while handling containers.
Respiratory protection:	Self-contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen deficient atmospheres.
Thermal hazards:	Wear goggles with suitable filter lenses when use is cutting/ welding

Environmental exposure controls
Refer to local regulations for restriction of emissions to the atmosphere.

Section 9. Physical and Chemical Properties

General Information
Appearance

- Physical state at 20◦C / 101.3 kPa:	Gas.
- Colour:	Colourless
Odour:	Garlic like
Odour threshold:	Odour threshold is subjective and inadequate to warn for overexposure.
pH value:	Not applicable
Molar mass:	26.04 g/mol
Melting point (◦C):	-80.8 °C

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Boiling point (◦C):	-84 °C
Critical temperature:	35 °C
Flash point (◦C):	Not applicable
Evaporation rate (ether=1):	Not applicable
Flammability range (vol% in air):	Flammability range not available – Extremely flammable
Auto-ignition temperature (◦C):	305 °C
Vapour pressure (20◦):	44 bar
Vapour pressure (50◦):	No reliable data available.
Relative density, gas (air=1):	Lighter or similar to air –> 0.9
Solubility in water (mg/l):	No data available.
Partition coefficient n-octanol/water:	0.37

Section 9. Physical and Chemical Properties (continued)

Explosive properties:	Not applicable
Oxidising properties:	Not applicable
Other information:	None.

Section 10. Stability and reactivity

Reactivity
No reactivity hazard other than the effects described in sub-sections below.
Chemical stability
Stable under recommended handling and storage conditions.
Possibility of hazardous reactions
Acetylene should not be used at pressure above 1.5bar (g)
May decompose violently at high temperature and/or pressure or in the presence of a catalyst
When heated to decomposition, emits acid fumes and may be explosive
Can form explosive mixture with air
May react violently with oxidants.
Conditions to avoid
Acetylene should not be used at pressures above 1.5 bar(g)
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Incompatible materials
Avoid copper and silver if acetylene is present
Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

General
No known effects of this product.
Acute toxicity
No toxicological effects from this product
Aspiration Hazard
Not applicable for gases and gas-mixtures

Section 12. Ecological Information

Toxicity:	Classification criteria are not met
Persistence and degradability:	No data available
Bio accumulative potential:	No data available
Mobility in soil:	No data available

Other adverse effects

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-Effect on ozone layer: None
-Effect on the global warning: No know effects from this product.

Section 13. Disposal Considerations

Waste treatment methods
Do not discharge into areas where there is a risk of forming an explosive mixture with air.
Do not discharge into any place where its accumulation could be dangerous.
Ensure that the emission levels from local regulations or operating permits are not exceeded.
Dispose according to local regulations only (Cylinder contains porous mass which in some cases contains asbestos and is saturated with a solvent (acetone)

Additional information
None.

Section 14. Transport Information

UN Number: 1001
UN Proper Shipping Name: ACETYLENE, DISSOLVED

Labelling ADR, IMDG, IATA:

2.1: Flammable gases

Road/Rail Transport (ADG)
Class: 2
Hazchem code: 2YE
Hazard identification number: 239

Air Transport (IATA-DGR, ICAO-TI)
Class / Div. (Sub.risk(s)): 2.1

Sea Transport (IMDG)
Class / Div. (Sub.risk(s)): 2.1
Emergency Schedule (EmS) Fire: F-D
Emergency Schedule (EmS) Spillage: S-U

Packing Group: Not applicable
Environmental Hazards: None

Special precautions for user

Packing Instruction(s)
Road/Rail Transport (ADG): P200
Air Transport (IATA-DGR / ICAO-TI)
Passenger and Cargo Aircraft: Forbidden
Cargo Aircraft only: 200
Sea Transport (IMDG): P200

Special transport precautions

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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 containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure 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

National legislation : Ensure all national/local regulations are observed.

Section 16. Other Information

Training advice : Ensure operators understand the flammability hazards. Receptacle under pressure.

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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