



SAFETY DATA SHEET

SDS No : SDS - 003
Revision : 0
Issue Date : 04.09.2015

CO₂ COMPRESSED

1. IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND OF THE COMPANY/ UNDERTAKING.

Trade/ Commercial Name Carbon dioxide.
Chemical Description Carbon dioxide
CAS No: 000124-38-9, EC No: 204-696-9
Chemical Formula CO₂
Use Industrial & Professional. Perform risk assessment prior to use.
Company Identification Air Liquide India Holding Pvt. Ltd.
A-24/9, Mohan Co-operative Industrial Estate,
Mathura Road, New Delhi-110044.
Emergency Contact No. 011-30157288

2. HAZARDS IDENTIFICATION

Physical Hazards Gases under pressure – Compressed gas – Warning (H280)
Label Elements Non flammable and Non toxic gas(2.2)



Hazard Pictograms Code GHS04
Hazard Statement H280: Contains gas under pressure; may explode if heated.
Precautionary Statements Wear cold insulating gloves/ face shield/ eye protection. Avoid spills. Do not walk on or roll equipment over spill. Close valve after each use and when empty.
Storage P403: Store in a well-ventilated place.
Other Hazards Asphyxiant in high concentrations.
Symbol(s) None.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Name	CAS (Product identifier)	%
Carbon dioxide	124-38-9	99.5 - 100%

4. FIRST AID MEASURES

Inhalation In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/ consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped. Low concentrations of CO₂ cause increased respiration and headache.
Skin/ Eye Contact Immediately wash eyes with copious amount of water for at least 15 minutes. In case of frostbite, spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.
Ingestion Ingestion is not considered a potential route of exposure.

5. FIRE FIGHTING MEASURES

Specific Hazard Exposure to fire may cause containers to rupture/ explode.
Hazardous Combustion None.
Suitable Extinguishing Media All known extinguishants can be used.
Products Specific Methods If possible, stop the flow of product. Move away from the container and cool with water from a protected position.
Special Protective Equipment for Fire Fighters In confined space use self-contained breathing apparatus.

CO₂ COMPRESSED**6. ACCIDENTAL RELEASE MEASURES****Personal Precautions**

Evacuate area.

Use self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Ensure adequate air ventilation.

Environmental Precautions

Try to stop release.

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

Clean up Methods

Ventilate the area and keep evacuated.

7. HANDLING & STORAGE**Handling**

Suck back of water into the container must be prevented.

Do not allow backfeed into the container.

Use only properly specified equipments which are suitable for this product, its supply pressure and temperature. Contact your Gas supplier if in doubt.

Refer to supplier's container handling instructions.

Storage

Keep container below 50°C in a well ventilated place.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION**Personal Protection**

Do not smoke while handling the product. Ensure adequate ventilation. Protect eyes, face and skin from liquid splashes. Use proper PPEs, while using the product. Avoid Oxygen rich (>21%) atmosphere.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Physical State at 20°C**

Gas.

Color

Colorless Gas.

Odor

No odor warning properties.

Molecular Weight

44 g/mole.

Molecular FormulaCO₂**Boiling/ Condensation Point**

-78.5°C

Melting/ freezing point

-56.6°C

Critical temperature

30°C

Relative Density, Gas (air=1)

1.52

Relative Density, Liquid (water=1)

0.82

Flammability Range (vol. % in air)

Non flammable.

Auto-Ignition Temperature

Not Applicable.

Other Data

Gas/ Vapors heavier than air. May accumulate in confined space, particularly at or below ground level.

10. STABILITY AND REACTIVITY**Chemical Stability**

Stable under normal condition.

Hazardous Decomposition Products

None.

11. TOXICOLOGICAL INFORMATION**Toxicity Information**

In high concentrations cause rapid circulatory insufficiency. Symptoms are headache, nausea and vomiting, which may lead to unconsciousness.

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12. ECOLOGICAL INFORMATION

Ecological Effect Information

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

13. DISPOSAL CONSIDERATIONS

General

Do not discharge into any place where its accumulation could be dangerous.
 To atmosphere in a well ventilated place.
 Discharge to atmosphere in large quantities should be avoided.
 Contact supplier if guidance required.

14. TRANSPORT INFORMATION

UN Number

1013

Labeling ADR, IMDG ,IATA

Non flammable and Non toxic gas (2.2)



Land Transport:

UN Proper Shipping Name

Carbon dioxide.

Transport Hazard Class

2

Hazchem Code

2RE

Tunnel/ Underpass Restriction

Passage forbidden through long tunnels and underpasses.

Avoid transport on vehicles where the load space is not separated from the driver's compartment.

Ensure vehicle drivers are aware of the potential hazards of the load and know what to do in the event of an accident or an emergency.

Before transporting product containers ensure:

- That container is firmly secured.
- Cylinder valve is closed and not leaking.
- Valve outlet cap nut or plug (where provided) is correctly fitted.
- Valve protection device (where provided) is correctly fitted and
- Product transport container/ tank should keep or stand in well ventilated area.

15. REGULATORY INFORMATION

Workplace Hazardous Materials Information System (WHMIS)

1. **Class A:** Compressed gas.
2. Non flammable and non toxic gas (2.2).
3. Ensure all national/ local regulations are observed.

16. OTHER INFORMATION

- May cause frostbite.
- Keep container in a well-ventilated place.
- Do not breathe the gas.
- Asphyxiate in high concentrations.
- The hazard and asphyxiation are often overlooked and must be stressed during operator training.

DISCLAIMER OF LIABILITY:

Details given in this document are believed to be correct at the time of going to press. 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. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.