

Carbon Dioxide (CO₂)



- Colourless
- Odourless
- Non-flammable
- Non-toxic

Applications:

Use in anaesthesia, vasodilatation, surgery...

Color Coding: Green

Purity: $\geq 99.9\%$

H₂O: ≤ 67 ppm

Hazards :



UN NB: 1013

LGI technical Capabilities:

- ◆ Experience since 1952
- ◆ Environmental safe processes
- ◆ Main Partners: Afrox, Linde....
- ◆ As per South African standard
- ◆ Fleet of special delivery trucks (4 delivery vehicles)
- ◆ Management of customers' stock and availability at all times
- ◆ Cylinder test workshop (testing , cleaning, quality check ,painting)



Chemical Properties

Molecular Weight	Specific Volume @ 20°C & 101.325 Kpa
44.011 g/mol	547 ml/g

Hazards

- CO₂ does not support life. It can act as a simple asphyxiant by diluting the concentration of oxygen in air below the levels necessary to support life
- As it is heavier than air it will tend to concentrate at lower levels
- All cylinders are portable gas containers and must be regarded as pressure vessels at all times

Uses and Features

- To increase the depth of anaesthesia rapidly when volatile agents are being administered. It increases depth of respiration and helps to overcome breath-holding and bronchial spasm
- To facilitate blind intubation in anaesthetic practice
- To facilitate vasodilation, and thus lessen the degree of metabolic acidosis during induction of hypothermia
- To increase the cerebral blood flow in arteriosclerotic patients undergoing surgery
- To stimulate respiration after a period of apnoea

Handling and Storage

- Do not allow cylinders to slide or come into contact with sharp edges
- CO₂ cylinders must be stacked vertically at all times, and should be firmly secured in order to prevent them from being knocked over
- Use a "first in - first out" inventory system to prevent full cylinders from being stored for excessive periods of time
- Keep out of reach of children