Medical Carbon dioxide

PROPERTIES PHYSICAL & CHEMICAL



02

Molar mass: 44.01 g/mol

Boiling point (sublimation): -78.5°C

Density of the gas phase (1.013 bar and

15°C): 1.874 kg/ma

Gas density (1.013 bar at the sublima-

tion point): 2.814 kg/ma

Latent heat of fusion (1.013 bar at triple

point): 196.108 kJ/kg

Latent heat of vaporization (at 1.013 bar

boiling point): 571.08

kJ/kg

Critical temperature: 31°C

Critical pressure: 73.825 bar

Compressibility factor (Z): 0.9942

Concentration in air: 0.03% vol.

APPLICATIONS:

- Medical carbon dioxide is used as an insufflation gas and cooling agent.
- It can be used as an insufflation gas for minimally invasive surgery (laparoscopy, endoscopy and arthroscopy) to expand and stabilize cavities for better visibility of the surgical field.
- It is also used as a freezing agent in cryosurgery. This involves destroying cells by necrosis and cryodestruction.
- Used in the liquid phase, it allows temperatures of up to -76° C to be obtained, for cryotherapy or local analgesia by external application to the surface of the skin.

TECHNICAL INFORMATION

Purity:	Impurities :			
CO2	CO	ST	H2O	NOx
≥ 99.5 %	≤ 5 ppm	≤ 01 ppm	≤ 67 ppm	≤ 02 ppm

Conditioning:

GCO2	LCO2	
B50	Cryogenic mobil Tank	

European Pharmacopoeia

