

# Industrial Carbon dioxide



## PROPERTIES

### PHYSICAL & CHEMICAL



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/m<sup>3</sup>  
 Gas density (1.013 bar at the sublimation point): 2.814 kg/m<sup>3</sup>  
 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 :

**Welding :**  
 In MIG/MAG welding, it serves as a shielding gas, it protects the weld pool from oxidation. Additionally, in combination with argon, carbon dioxide is used to achieve improved welding speed and reduce the need for post-weld treatment.

**The chemical industry:**  
 Very large quantities of CO<sub>2</sub> are used as feedstock for the production of methanol and urea.

**In the oil industry:**  
 Carbon dioxide can be pumped into oil wells to optimize their yield. During this process, the CO<sub>2</sub> partially dissolves, making the oil less viscous and easier to extract from bedrock.

## TECHNICAL INFORMATION

Purity :	Impurities :			
CO <sub>2</sub>	CO	CO <sub>2</sub>	H <sub>2</sub> O	NO <sub>x</sub>
≥ 99.5 %	≤ 5 ppm	≤ 300 ppm	≤ 67 ppm	≤ 02 ppm

## Conditioning :

GCO <sub>2</sub>	LCO <sub>2</sub>
B50	Cryogenic mobil Tank

