

Carbon Dioxide (CO₂), Liquid

A colourless, odourless, non-flammable gas that is denser than air. Supplied as liquid from tanker to bulk storage vessel.

Hazards

- Low temperature liquid, rapid release to atmosphere will produce solid carbon dioxide (dry ice) and low temperature gas
- High pressure liquefied gas
- Asphyxiant in high concentration.

Classifications

Gas	Purity
Carbon dioxide technical	99,95%

Supply

Details of a wide range of storage vessels and ancillary equipment are available from Afrox on request.

Physical Data

Appearance/odour	Colourless, odourless and non-toxic liquid
Molecular weight	44,01 l
Critical temperature	31,0°C
Relative density (air = 1) at 101,325 kPa and 0°C	1,53
Density, liquid at boiling point 156,0 kg/m ³	-122,29°C
Flammability	N/A

Uses and Features

- Carbon dioxide uses include: soft drink carbonisation, food freezing and chilling, purging and inerting, snow shooting for in-transit refrigeration, and potable water treatment
- Carbon dioxide is also used as a chemical reactant, pH buffer, grain storage fumigation, greenhouse atmosphere enrichment, oil well stimulation and clean-out, tobacco processing, propellant in aerosol packaging, solvent for extraction of organic chemicals.

Material Compatibility

- Dry carbon dioxide is non-corrosive, hence any common material is acceptable, e.g. steel, iron, copper, brass, plastic
- Moist carbon dioxide is slightly corrosive, hence acid resistant materials are required, e.g. stainless steel, certain plastics. Low temperatures require special materials of construction.

Precautions in Use

- Use only approved pressure and temperature rated equipment
- Workers should use gloves and may require additional protective clothing (apron, face shield) which is resistant to low temperatures to prevent freeze burns and frostbite, if more than momentary contact with solid CO₂ at low temperature is required
- Refer to MSDS for more information.

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