



# MATERIAL SAFETY DATA SHEET

Date of Issue: **July 2010**

## 1. IDENTIFICATION

Chemical Name: *Carbon Dioxide*

Manufacturer/Supplier: *FlameStop Australia Pty Ltd  
1/70 Gibbes Street  
CHATSWOOD NSW 2067*

UN Number: *1013*

Synonyms: *AligaIR2, Lasal R2*

Use: *Inert gas widely used in chemical, food and beverage, petrochemical and metal industries.*

Dangerous Goods Class and Subsidiary Risk: *2.2*

Hazchem Code: *2TE*

Poison Schedule Number: *None allocated*

Group Text. Emergency Procedure Guide: *AS 1678 2C1*

### Physical Properties

Appearance: *Colourless, Sharp odour*

Sublimation Temp: *-78.5°C*

Vapour Pressure: *(at 15°C) 5090 kPa*

Flashpoint: *non-flammable*

Flammability Limits: *non-flammable*

Solubility in Water (at 0°C): *1.716m<sup>3</sup>/kg*

### Other Properties

Relative Density (at 15°C)  
(Air =1): *1.53*

Molecular Weight: *44.01*

Density of Gas  
(101.3kPa, 15°C): *1.873kg/m<sup>3</sup>*

Critical Temperature: *31.06°C*

### Ingredients

Chemical Entity: *Carbon Dioxide*

CAS Number: *124-38-9*

Proportion: *99.8%*



## **2. HEALTH HAZARD INFORMATION**

### **Health Effects**

#### Acute

Swallowed: *Not applicable to gases*  
Eye: *Not irritating to the eye*  
Skin: *Not irritating to the skin*  
Inhaled: *Carbon Dioxide is non-toxic at normal temperature and pressure. By diluting the oxygen concentration in air below the level necessary to support life, it can act as an asphyxiant. Effects of oxygen deficiency are: 12-16%: breathing and pulse rate increased, muscular coordination slightly disturbed; 10-14% :emotional upset, normal fatigue, disturbed respiration; 6-10% nausea and vomiting, collapse or loss of consciousness; below 6%: convulsive movements, possible respiratory collapse and death.*

#### Chronic

Long term exposure to carbon dioxide has no known health effects. Prolonged exposure to an oxygen deficient atmosphere (below 18% oxygen in air) may affect the heart and nervous system.

#### First Aid

Call Doctor.

If victim is conscious: Move to uncontaminated area to breathe fresh air. Keep warm and quiet.

If victim is unconscious: Move to uncontaminated area and give assisted respiration. When normal breathing restored, treatment as above. Continued treatment should be symptomatic and supportive.

#### Advice to Doctor

Advise doctor that victim has been exposed to an oxygen deficient atmosphere.

## **3. PRECAUTIONS FOR USE**

#### Exposure Standards

TWA 5,000 ppm v/v STEL 30,000 ppm v/v

#### Engineering Controls

Provide adequate local exhaust and dilution (general) ventilation and supply sufficient replacement air to maintain oxygen concentration above 18%.



### Personal Protection

Personnel engaged in the movement of cylinders shall be provided with safety footwear and leather or PVC gloves. Full cover overalls and safety glassed recommended. In areas where equipment failure may cause an immediate high concentration of CO<sub>2</sub>, approved self-contained full-face respiratory equipment should be readily available.

### Flammability

Carbon dioxide is non-flammable

## **4. SAFE HANDLING INFORMATION**

### Storage and Transport

Storage of compressed gas cylinders shall be in compliance with State or Territory regulations. Cylinders shall be stores in a cool, dry, well ventilated area out of direct sunlight and away from heat and ignition sources. No part of cylinders shall be exposed to temperatures above 55°C. Cylinders shall be stored upright on a level, fireproof floor, secure in position and protected from damage. Full cylinders shall be stored separately from empties.

Cylinders should be moved by hand-truck or cart designed for that purpose. Avoid any contact with oil or grease particularly to the cylinder valve.

### Spills and Disposal

Ventilate area. Stop leak if it can be done without risk. Allow gas to dissipate to atmosphere.

### Fire/Explosion Hazard

Carbon Dioxide is non-flammable, but container may rupture when heated. Move cylinders from fire if safe to do so. Cool cylinders with water from a protected location. If unable to keep cylinders cool, evacuate area.

### General

Only experienced and properly instructed personnel should handle compressed gases. Cylinder contents and identification labels provided by the supplier must not be removed or defaced. Colour coding should not be the only criterion used for content identification.



*Material Safety Data Sheet*

*Carbon Dioxide*

## **5. OTHER INFORMATION**

This data is based on our present knowledge. However, it shall not constitute a guarantee for any specific product featured and shall not establish a legally valid contractual relationship

Department Issuing Data  
Specification Sheet:

*Product Safety Department*

Contact:

*Technical Manager 02 9932 2020*

