



Carbon Dioxide

- ▶ Gaseous Carbon dioxide is used commercially in the carbonation of beverages.
- ▶ Restaurants
- ▶ Fast Food
- ▶ Convenience Store
- ▶ Theaters
- ▶ Sports Venues
- ▶ Retailers
- ▶ Theme/Amusement




CARBON DIOXIDE IS CONSIDERED AN ASPHYXIANT GAS.
 Annual Hazardous Material Permit required when greater than 6,000 cubic feet.
 It is regulated by the Fire Code when amounts at or greater than 100 pounds.

Conversions

PRODUCT NAME	Cubic Feet/Pound	Pounds/Gallon	Cubic Feet/Gallon
Carbon Dioxide (CO ₂) CAS: 124-38-9	8.74	8.46	73.94

DO YOU HAVE CARBON DIOXIDE FOR BEVERAGE DISPENSING OR OTHER?

YES OR NO

IF YES, WHAT IS THE QUANTITY?

NUMBER OF CONTAINERS? _____

SIZE OF CONTAINERS? _____ POUNDS TOTAL POUNDS? _____

IS YOUR STORAGE INDOOR – WITHIN THE BUILDING? **YES OR NO**

DO YOU HAVE A CARBON DIOXIDE GENERATOR ON SITE? **YES OR NO**

If your indoor carbon dioxide system includes containers of 100 pounds to 1,000 pounds, then ventilation in accordance with the International Mechanical Code and International Fire Code is required. CO₂ continuous gas detection and alarm device(s) required. **Code Reference: IFC 2009 Sections 3007.2, 2704.3 or 2705.1.9; and IMC 2009, Chapter 5, Sections 502.8.1, 502.8.1.1; CSFD Administrative Ruling 2011-001. Your plans will be reviewed by Pikes Peak Regional Building – Mechanical Division and the Colorado Springs Fire Department - Hazardous Materials. Show storage on plan sheets.**

If you store carbon dioxide exterior of the building, refer to exterior CO₂ storage requirements.

DATE: _____

Owner Name (print)

Owner Name (signature)

Facility/Business Address

CARBON DIOXIDE (CO₂) EXTERIOR STORAGE

- Shall be above grade.
- Shall not be obstructed by more than three sides of the perimeter with supports and walls.
- Shall not be installed within 10 feet of elevators, unprotected platform ledges or other areas where falling would result; shall not be installed on roofs, shall not be installed with 36 in of electrical panels.
- Shall be safely supported; vessel foundation must be capable of supporting the full system weight.
- Supply line shall be UV resistant or protected conduit or appropriate covering.
- Shall be equipped with isolation valves installed on the fill line and tank discharge or gas supply line. They shall be designed/marked to indicate open or closed, shall be accessible, clearly marked or identified, and capable of being locked or tagged in closed position for servicing.
- When extreme temperatures prevail, overhead covers shall be provided. Compressed gas containers, cylinders and tanks, whether full or partially full, shall not be exposed to artificially created high temperatures exceeding 125°F or sub-ambient (low) temperatures unless designed for use under the exposed conditions.
- Areas used for the storage, use and handling of compressed gas containers, cylinders, tanks and systems shall be secured against unauthorized entry and safeguarded in an approved manner. (i.e. fence, expanded metal cage or cabinet).
- Guard posts or other approved means shall be provided to protect compressed gas containers, cylinders, tanks and systems indoors and out-doors from vehicular damage and shall comply with IFC 2009 Section 312.
- Labeling - An NFPA 704 compliant Hazard Placard is required. This requirement is subject to verification at the time of the Hazardous materials Inspection prior to signing the Fire Final. Additional hazard warning signage specific to the material is required.

