



*William Reilich
Supervisor*

TOWN OF GREECE

Department of Technical Services

1 VINCE TOFANY BOULEVARD ~ ROCHESTER, NEW YORK 14616-5016

Fire Marshal's Office

Phone (585) 723-2439 Fax (585) 723-2442

Reference Material

CARBON DIOXIDE (CO₂) SYSTEMS USED IN BEVERAGE DISPENSING APPLICATIONS

§FC5307.1 General.

Carbon dioxide systems with more than 100 pounds (45.4 kg) of carbon dioxide used in beverage dispensing applications shall comply with Sections FC5307.2 through FC5307.5.2.

§FC5307.2 Permits.

Permits shall be required as set forth in Section FC105.6.

§FC5307.3 Equipment.

The storage, use, and handling of liquid carbon dioxide shall be in accordance with Chapter FC53 and the applicable requirements of NFPA 55, Chapter 13. Insulated liquid carbon dioxide systems shall have pressure relief devices vented in accordance with NFPA 55.

§FC5307.4 Protection from damage.

Carbon dioxide systems shall be installed so the storage tanks, cylinders, piping and fittings are protected from damage by occupants or equipment during normal facility operations.

§FC5307.5 Required protection.

Where carbon dioxide storage tanks, cylinders, piping and equipment are located indoors, rooms or areas containing carbon dioxide storage tanks, cylinders, piping and fittings and other areas where a leak of carbon dioxide can collect shall be provided with either ventilation in accordance with Section FC5307.5.1 or an emergency alarm system in accordance with Section FC5307.5.2.

§FC5307.5.1 Ventilation.

Mechanical ventilation shall be in accordance with the *International Mechanical Code* and shall comply with all of the following:

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1. Mechanical ventilation in the room or area shall be at a rate of not less than 1 cubic foot per minute per square foot [$0.00508 \text{ m}^3/(\text{s} \cdot \text{m}^2)$].
2. Exhaust shall be taken from a point within 12 inches (305 mm) of the floor.
3. The ventilation system shall be designed to operate at a negative pressure in relation to the surrounding area.

§FC5307.5.2 Emergency alarm system.

An emergency alarm system shall comply with all of the following:

1. Continuous gas detection shall be provided to monitor areas where carbon dioxide can accumulate.
2. The threshold for activation of an alarm shall not exceed 5,000 parts per million (9,000 mg/m^3).
3. Activation of the emergency alarm system shall initiate a local alarm within the room or area in which the system is installed.

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