

### TOWN OF BRIDGEWATER

### FIRE DEPARTMENT **Fire Prevention Division**

FIRE HEADQUARTERS • 22 SCHOOL STREET BRIDGEWATER, MA 02324







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# **Propane Exchange/Storage Cage Requirements**

The installation of a propane exchange/storage cage shall be in accordance with the 527 CMR 1.00 2015 Edition and NFPA 58, 2017 Edition.

- Storage is limited to two cages, containing up to 18 20 lbs. propane cylinders in each cage (720 lbs. total) for retail sales or two cages with 12 – 33lbs forklift cylinders in each cage (792 lbs. total) for industrial use, without any separation from a structure. Additional cages may be installed next to a structure on the same property provided increased separation is maintained between cages pursuant to IFC requirements. (69.5.4.1.2, 58:8.5.1\*)
- A site plan for the installation must be submitted to the Fire Prevention Division along with an application for permit. The site plan shall indicate the size(s) and location(s) of the propane exchange/storage cage(s), as well as the separation distances between cages, the distance to property lines, structures, building openings and public walkways. (69.1.2)
- Propane exchange/storage cages shall be located in a manner that minimizes exposure to • excessive temperature rise, physical damage, and tampering. (69.5.2.1.1)
- Propane exchange/storage cages shall not be within 10 feet of any doorway or opening in a building frequented by the public, within 20 feet of a motor vehicle fuel dispensing station, or within 10 feet of any combustible material. (69.5.4.1.1)
- The cage shall be a lockable, ventilated, metal locker or rack that prevents tampering or • pilferage. (69.5.4.2.1)
- The propane exchange cage shall be designed so containers cannot be stacked on top of each other and designed so that containers are positioned up right with the pressure relief valve in direct communication with the vapor space of the container. Forklift cylinder cages must be designed to have tanks lying horizontally with pressure relief valves facing forward to vent through front of cage. (58:8.4.2.1\*, 58:8.4.2.2)
- Container outlet valves shall be closed and plugged when in storage. (69.5.2.2.2)
- Defective containers or containers showing denting, bulging or excessive corrosion shall be • removed from service and properly disposed. (58:8.2.2.3)
- The cage and area shall be kept free and clear of all combustible materials, including storage, for • a distance of at least 10 feet on all sides.
- NO SMOKING signs shall be posted on the exchange/storage cage and within 25 feet of the • surrounding area. (69.5.2.1.6)
- An approved NFPA 704 hazard identification sign/placard shall be posted on the cage. The NFPA 704 sign shall be a minimum of 1 foot square.
- Signs listing exchange/storage procedures, company name and 24-hour emergency phone numbers shall be posted within 10 feet of the cage. Emergency numbers shall be on file in the site managers office and service desk if applicable.



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- Signage requiring that customers leave LPG containers outside shall be posted on the building entrance(s). The signage shall read "DO NOT BRING LP GAS CYLINDERS INTO THE BUILDING". The fire department requires that the lettering be a minimum of 1 inch in height with a stroke of 1/8 inch in a contrasting color.
- All employees with access to the exchange/storage cage(s) shall be trained in the proper handling and operating procedures, including the handling of defective containers. Documentation of this training shall be provided to the Fire Prevention Division at the time of final inspection and kept on file at the site managers office. (69.1.4.4.1)
- For retail exchange cage(s) a written inspection checklist for receiving empty containers as well as giving out full containers shall be available and used by employees when handling containers.
- Provisions shall be made for controlling and mitigating unauthorized discharges. A Hazardous Management Plan shall be readily available on site.
- A minimum of one (1) 2A:20-BC fire extinguisher shall be located within 75 feet, but not less than 25 feet from cage area. (69.5.5.1)
- Propane exchange/storage cages exposed to probable vehicular damage due to proximity of alleys; driveways or parking areas shall minimally be protected as follows:
  - Install 4-inch diameter steel pipes filled with concrete or concrete/steel traffic barriers, traffic barriers must be approved by Fire Prevention Division.
  - Pipes or barriers shall be spaced no more than 4 feet apart.
  - Pipes shall be set at least 3 feet deep in a concrete footing and be at least 15 inches in diameter. Traffic barriers must be permanently affixed to the ground in a manner approved by the Fire Prevention Division. Temporary cages (less than 90 days on-site) can have non-affixed barriers that are approved by the Fire Prevention Division.
  - $\circ$   $\;$  The top of posts shall be at least 3 feet above ground level.
  - Posts shall be located more than 5 feet from the propane cage. Areas not permitting 5 feet minimum must be approved by Fire Prevention Division.