

**Storage
Oxy-fuel gas
Welding and Cutting
4-22-13**

(6) Storage of Oxygen and Fuel Gas Cylinders

(a) You must store oxygen and fuel gas cylinders in locations:

- (A)** Assigned. 253(b)(2)(ii)
- (B)** Well ventilated. 253(b)(2)(ii)
- (C)** Where water has not accumulated.
- (D)** Away from heat sources. 253(b)(2)(i) & CGA R-1 2006
- (E)** Posted with signs prohibiting smoking and open flame within 20 feet. 0293(5)
- (F)** Where the temperature does not exceed 125°F (52°C). CGA
- (G)** Where sparks, hot slag, or flame will not reach them. 253(b)(5)(ii)(I)
- (H)** Where full and empty cylinders are separated.
- (I)** Where they will not contact electrical welding equipment or electrical circuits.
253(b)(5)(ii)(J)

NOTE: All high and low pressure cylinders in contact with or secured to a conductive table or column without being isolated from electrical current can become part of an electrical circuit.

- (J)** Where they are protected from corrosion. CGA P-1 2006
- (K)** Where they cannot be knocked over. 253(b)(2)(ii)
- (L)** Where they cannot be damaged by passing or falling objects. 253(b)(2)(ii)
- (M)** Where they will not be tampered with by unauthorized persons. 253(b)(2)(ii) & 253(b)(5)(iii)(H)
- (N)** Where they will not be struck by heavy objects. 253(b)(2)(ii)
- (O)** Away from exit routes. 437-002-0041(8)(c)
- (P)** Where they will not be subject to unventilated enclosed spaces. 253(b)(2)(ii)

(Q) That are not identified as confined spaces. 253(b)(2)(ii)

(b) You must store cylinders in the following manner:

(A) With valve caps in place. 253(b)(2)(iv)

NOTE: This applies to cylinders designed to accept valve caps.

(B) Secured from movement. 437-002-0293(4)

(C) Liquefied gas cylinders and acetylene cylinders with valve end up.
253(b)(5)(iii)(A) & 253 (b)(3)(ii)

NOTE: Liquefied petroleum gas cylinders used on forklifts may be stored either horizontally or vertically

(D) Refrigerated liquid cylinders in a vertical position. CGA

(E) With all individual oxygen and flammable gas cylinder valves on portable banks closed. CGA

(c) Separate oxygen cylinders from fuel-gas cylinders or combustible materials (especially oil or grease) and any other substance likely to cause or accelerate fire by:

(A) A minimum distance of 20 feet, or

(B) A noncombustible barrier that:

(i) Vertically extends 18 inches above the tallest oxygen cylinder(s) and is at least 5 feet high.

(ii) Laterally extends 18 inches beyond the sides of the oxygen cylinders.

(iii) Has a fire-resistance rating of at least one-half hour. 437-002-2102(1)(e)(B)(v)

(d) Separate oxygen and fuel gas cylinders secured on a cart from assigned cylinder storage areas by a minimum of 20 feet or a non combustible barrier. 253(b)(4)(iii) & 253(b)(4)(i)

NOTE 1: Single cylinders of oxygen and fuel gas can be secured on a cart or used adjacent to each other without being separated by a partition

NOTE 2: An additional set of cylinders secured at a workstation without attached pressure reducing regulators will be considered in use and not in storage.

(e) Store cylinders of fuel gases in excess of 2,000 cubic feet total gas capacity or 300 pounds of liquefied petroleum gas (this does not apply to cylinders in actual use or attached ready for use) in the following manner: 253(b)(3)(i)

(A) Outside or,

(B) In a separate room, compartment or special building with interior walls, partitions, floors, and ceilings that: 253(f)(6)(i)(H)

(i) Are constructed with noncombustible material having a fire-resistance floor to ceiling 253(f)(6)(i)(H)

(ii) Are securely anchored 253(f)(6)(i)(H)

(iii) Have at least one wall of the room that is an exterior wall 253(f)(6)(i)(H)

(C) The room must have a swinging type, self-closing fire door for a Class B opening and have a rating of at least 1 hour if there are openings to other parts of the building. 253(f)(6)(i)(I)

(D) The room must have wired glass windows mounted with approved metal frames and fixed sashes where windows are used. They must be installed in accordance with the Standard for the Installation of Fire Doors and Windows, NFPA 80-1970. 253(f)(6)(i)(I)

NOTE: Storage rooms built after **March 1, 2013** must comply with NFPA 80-2010.

(f) You must comply with the provisions of the Standard for Bulk Oxygen Systems at Consumer Sites, NFPA No. 55-2010 when a liquid oxygen system is to be used to supply gaseous oxygen that has a storage capacity of more than 20,000 cubic feet of oxygen (measured at 14.7 psia (101 kPa) and 70° F (21.1° C)), connected in service or ready for service, or unconnected reserves on site. (NFPA 55-2010, 3.3.15) 253(b)(4)(iv)

NOTE: the date used is arbitrary and subject to change.