

General Requirements
Oxy-fuel gas
Welding and cutting
4-22-13

(4) General Requirements

(a) You must:

(A) Guard against mixtures of fuel gases and air or oxygen that may be explosive. 253(a)(1)

(i) Use approved apparatus such as torches, regulators, or pressure reducing valves, hoses and connections, protective equipment, acetylene generators, and manifolds. 253(a)(3) & 253(e)(1)

(ii) Install reverse flow check valves and flashback arrestors according to manufacturers' recommendations. 437-002-0290(1)

(B) Use cylinders that meet the Department of Transportation requirements published in 49 CFR Part 178. 350(c)(2)

(C) Use portable cylinders for the storage and shipment of compressed gases that are constructed and maintained in accordance with the U.S. Department of Transportation regulations, 49 CFR Parts 171-179. 253(b)(1)(i)

(D) Use compressed gas cylinders whose contents are legibly marked with:

(i) The chemical or trade name of the gas in conformance with CGA C-7 Guide to Preparation of Precautionary Labeling and Marking of Compressed Gas Containers, and 253(b)(1)(ii)

(ii) Stenciling, stamping, or labeling that is not readily removable. 253(b)(1)(ii)

(E) Protect against oil and grease hazards

(i) Keep cylinders, cylinder valves, couplings, regulators, hose, and apparatus free from oily or greasy substances. 1910.253(b)(5)(i)

(ii) Keep oxygen cylinders away from contacting oil and grease. 350(i)

(F) Follow the requirements of OAR 437-002-2253(13) Service Piping, OAR 437-002-2253 (14) Acetylene Generators, OAR 437-002-2253 (15) Calcium Carbide Storage when generating acetylene for immediate use at the work location.

(b) You must not:

- (A) Remove any product or shipping hazard labels. CGA & 253(b)(ii)
- (B) Deface any product or shipping hazard labels. CGA
- (C) Use liquid acetylene. 253(a)(2)
- (D) Generate acetylene at a pressure in excess of 15 psig (30 psia). 253(a)(2)
- (E) Pipe or utilize acetylene at a pressure in excess of 15 psig unless it is in an approved manifold. 253(a)(2)

NOTE 1: This requirement does not apply to storage of acetylene dissolved in a suitable solvent in cylinders manufactured and maintained according to U.S. Department of Transportation requirements, or to acetylene for chemical use. 253(a)(2)

NOTE 2: The 15 psig (30 psia) limit is intended to prevent unsafe use of acetylene in pressurized changers such as caissons, underground excavations, or tunnel construction. 253(a)(2)

- (F) Use any device or attachment facilitating or permitting mixtures of air or oxygen with flammable gases prior to consumption, except at the burner or in a standard torch, unless approved for the purpose. 253(a)(1)
- (G) Attempt to mix gases in a cylinder unless you are a gas supplier. 253(b)(5)(ii)(M) & 350(c)(2)
- (H) Refill a cylinder unless you are: 350(c)(2)
 - (i) The owner of the cylinder. 350(c)(2)
 - (ii) Authorized by the owner of the cylinder. 350(c)(2)
- (I) Use a cylinder's contents for purposes other than those intended by the supplier. 350(c)(2)
- (J) Use a damaged cylinder. 350(c)(3)
- (K) Repair or alter cylinders or valves. 253(b)(5)(ii)(R)(1)
- (L) Tamper with the numbers and markings stamped into cylinders. 253(b)(5)(ii)L
- (M) Handle oxygen cylinders, cylinder caps and valves, couplings, regulators, hoses, and apparatus with oily hands or gloves. 350(i) & 253(b)(5)(i)

- (N)** Permit a jet of oxygen to: 1910.253(b)(5)(i) & 350(i)
 - (i)** Strike an oily surface. 1910.253(b)(5)(i) & 350(i)
 - (ii)** Strike greasy clothes. 1910.253(b)(5)(i) & 350(i)
 - (iii)** Enter a fuel oil or other storage tank. 1910.253(b)(5)(i) & 350(i)
- (O)** Blow off clothing with oxygen. 253(b)(5) and 0291(2)