

§ 57.4600

WELDING/CUTTING/COMPRESSED GASES

§ 57.4600 Extinguishing equipment.

(a) When welding, cutting, soldering, thawing, or bending—

(1) With an electric arc or with an open flame where an electrically conductive extinguishing agent could create an electrical hazard, a multipurpose dry-chemical fire extinguisher or other extinguisher with at least a 2-A:10-B:C rating shall be at the worksite.

(2) With an open flame in an area where no electrical hazard exists, a multipurpose dry-chemical fire extinguisher or equivalent fire extinguishing equipment for the class of fire hazard present shall be at the worksite.

(b) Use of halogenated fire extinguishing agents to meet the requirements of this standard shall be limited to Halon 1211 (CBrClF₂) and Halon 1301 (CBrF₃). When these agents are used in confined or unventilated areas, precautions based on the manufacturer's use instructions shall be taken so that the gases produced by thermal decomposition of the agents are not inhaled.

§ 57.4601 Oxygen cylinder storage.

Oxygen cylinders shall not be stored in rooms or areas used or designated for storage of flammable or combustible liquids, including grease.

§ 57.4602 Gauges and regulators.

Gauges and regulators used with oxygen or acetylene cylinders shall be kept clean and free of oil and grease.

§ 57.4603 Closure of valves.

To prevent accidental release of gases from hoses and torches attached to oxygen and acetylene cylinders or to manifold systems, cylinder or manifold system valves shall be closed when—

- (a) The cylinders are moved;
- (b) The torch and hoses are left unattended; or
- (c) The task or series of tasks is completed.

§ 57.4604 Preparation of pipelines or containers.

Before welding, cutting, or applying heat with an open flame to pipelines or containers that have contained flammable or combustible liquids, flam-

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mable gases, or explosive solids, the pipelines or containers shall be—

(a) Drained, ventilated, and thoroughly cleaned of any residue;

(b) Vented to prevent pressure build-up during the application of heat; and

(c)(1) Filled with an inert gas or water, where compatible; or

(2) Determined to be free of flammable gases by a flammable gas detection device prior to and at frequent intervals during the application of heat.

§ 57.4660 Work in shafts, raises, or winzes and other activities involving hazard areas.

During performance of an activity underground described in Table C–2 or when falling sparks or hot metal from work performed in a shaft, raise, or winze could pose a fire hazard—

(a) A multipurpose dry-chemical fire extinguisher shall be at the worksite to supplement the fire extinguishing equipment required by § 57.4600; and

(b) At least one of the following actions shall be taken:

(1) Wet down the area before and after the operation, taking precaution against any hazard of electrical shock.

(2) Isolate any combustible material with noncombustible material.

(3) Shield the activity so that hot metal and sparks cannot cause a fire.

(4) Provide a second person to watch for and extinguish any fire.

TABLE C–2

Activity	Distance	Fire hazard
Welding or cutting with an electric arc or open flame		More than 1 gallon of combustible liquid, unless in a closed, metal container.
Using an open flame to bend or heat materials	Within 35 feet of—	More than 50 pounds of non-fire-retardant wood.
Thawing pipes electrically, except with heat tape		More than 10 pounds of combustible plastics.
Soldering or thawing with an open flame	Within 10 feet of—	Materials in a shaft, raise, or winze that could be ignited by hot metal or sparks.

(5) Cover or bulkhead the opening immediately below and adjacent to the activity with noncombustible material to prevent sparks or hot metal from falling down the shaft, raise, or winze. This alternative applies only to activities involving a shaft, raise, or winze.