



DEPARTMENT OF LABOR AND ECONOMIC OPPORTUNITY  
GENERAL INDUSTRY STANDARD

Filed with the Secretary of State on October 1, 1971 (as amended July 5, 1974) (as amended October 28, 1976)  
(as amended November 7, 1980) (as amended February 15, 1984)  
(as amended April 28, 2006) (as amended January 10, 2013) **(as effective February 2, 2024)**

These rules become effective 14 days after filing with the Secretary of State

(By authority conferred on the director of the department of labor and economic opportunity  
by sections 16 and 21 of the Michigan occupational safety and health act, 1974 PA 154, MCL 408.1016, and  
408.1021 and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4,  
2011-4, and 2019-3, MCL 445.2001, 445,2011, 445.2025, 445.2030, and 125.1998)

R 408.10801, R 408.10803, R 408.10826, R 408.10831, R 408.10833, and R 408.10837 of the Michigan  
Administrative Code are amended, R 408.10804, R 408.10805, R 408.10807, R 408.10808, R 408.10811, R  
408.10812, R 408.10813, R 408.10814, R 408.10821, R 408.10822, R 408.10823, R 408.10824, R 408.10825, R  
408.10835, R 408.10836, and R 408.10839 are rescinded, as follows:

## PART 8, PORTABLE FIRE EXTINGUISHERS

### Table of Contents:

R 408.10801. Scope.....	1	1910.157. Portable fire extinguishers.....	7
R 408.10803. Definitions C to D .....	2	1910.157(c) General requirements.....	7
R 408.10826. Class “K” extinguishers .....	2	1910.157(d) Selection and distribution.....	7
R 408.10831. Location.....	3	1910.157(e) Inspection, maintenance and testing....	7
R 408.10833. Installation .....	3	1910.157(f) Hydrostatic testing .....	8
R 408.10837. Recharging.....	3	1910.157(g) Training and education .....	9
<b>29 CFR SUBPART L – FIRE PROTECTION .....</b>	<b>4</b>		
1910.155. Definitions applicable to the subpart.....	5		

### R 408.10801 Scope, application, adoption, and availability of standards.

**Rule 801.** (1) The rules apply to the placement, use, maintenance, and testing of portable fire extinguishers provided for the use of employees. 29 CFR 1910.157(d) does not apply to extinguishers provided for employee use on the outside of workplace buildings or structures. Where extinguishers are provided but are not intended for employee use and the employer has an emergency action plan and a fire prevention plan that meet the requirements of 29 CFR 1910.38 and 29 CFR 1910.39, respectively, then only the requirements of 29 CFR 1910.157(e) and (f) apply. The provisions of this part are the minimum requirements for portable fire extinguishers. A specific rule may be set forth in other general industry safety standards where, due to process hazards, additional portable fire extinguishers may be required.

Exemptions. Where the employer has established and implemented a written fire safety policy which requires the immediate and total evacuation of employees from the workplace upon the sounding of a fire alarm signal and which includes an emergency action plan and a fire prevention plan which meets the requirements of 29 CFR 1910.38 and 29 CFR 1910.39 respectively, and when extinguishers are not available in the workplace, the employer is exempt from all requirements of this section unless a specific General Industry Safety and Health standard requires that a portable fire extinguisher be provided. Where the employer has an emergency action plan meeting the requirements of 29 CFR 1910.38, which designates certain employees to be the only employees authorized to use the available portable fire extinguishers, and which requires all other employees in the fire area to immediately evacuate the affected work area upon the sounding of the fire

alarm, the employer is exempt from the distribution requirements in 29 CFR 1910.157(d).

(2) The federal Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1910.155(c), "Definitions applicable to this subpart," as amended April 12, 1998, are adopted by reference in these rules, except for the following:

- (a) Section 1910.155(c)(1).
- (b) Section 1910.155(c)(5).
- (c) Section 1910.155(c)(6).
- (d) Section 1910.155(c)(15).
- (e) Section 1910.155(c)(16).
- (f) Section 1910.155(c)(17).
- (g) Section 1910.155(c)(18).
- (h) Section 1910.155(c)(19).
- (i) Section 1910.155(c)(20).
- (j) Section 1910.155(c)(22).
- (k) Section 1910.155(c)(25).
- (l) Section 1910.155(c)(28).
- (m) Section 1910.155(c)(29).
- (n) Section 1910.155(c)(30).
- (o) Section 1910.155(c)(32).
- (p) Section 1910.155(c)(33).
- (q) Section 1910.155(c)(34).
- (r) Section 1910.155(c)(35).
- (s) Section 1910.155(c)(36).
- (t) Section 1910.155(c)(37).
- (u) Section 1910.155(c)(39)(iv).
- (v) Section 1910.155(c)(40).
- (w) Section 1910.155(c)(42).

(3) The following federal Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1910.157, "Portable fire extinguishers," as amended November 7, 2002, are adopted by reference in these rules:

(a) A reference to 29 CFR 1910.38 means General Industry Safety Standard Part 6. "Fire Exits."

(b) A reference to 29 CFR 1910.39 means General Industry Safety Standard Part 6. "Fire Exits."

(c) A reference to 29 CFR 1910.158 means General Industry Safety Standard Part 9. "Fixed Fire Equipment."

(d) A reference to 29 CFR 1910.159 means General Industry Safety Standard Part 9. "Fixed Fire Equipment."

(4) The adopted federal regulations have the same force and effect as a rule promulgated under the Michigan occupational safety and health act, 1974 PA 154, MCL 408.1001 to 408.1094.

(5) The OSHA regulations adopted in these rules are available from the United States Department of Labor, Occupational Safety and Health Administration website, [www.osha.gov](http://www.osha.gov), at no charge, as of the time of adoption of these rules.

(6) The standards adopted in these rules are available for inspection at the Department of Labor and Economic Opportunity, Michigan Occupational

Safety and Health Administration (MIOSHA), Standards and FOIA Section, 530 West Allegan Street, P.O. Box 30643, Lansing, Michigan, 48909-8143.

(7) The following MIOSHA standards are referenced in these rules:

(a) General Industry Safety and Health Standard Part 6. "Fire Exits," R 408.10601 to R 408.10697.

(b) General Industry Safety Standards Part 9. "Fixed Fire Equipment," R 408.10901 to R 408.10999.

(8) Up to 5 copies of the standards listed in subrule (2) of this rule may be obtained at no charge from the Department of Labor and Economic Opportunity, MIOSHA, Standards and FOIA Section, 530 West Allegan Street, P.O. Box 30643, Lansing, Michigan, 48909-8143 or via the internet at the following website: [www.michigan.gov/mioshastandards](http://www.michigan.gov/mioshastandards). For quantities greater than 5, the cost, as of the time of adoption of these rules, is 4 cents per page.

**R 408.10803 Definitions; C to E.**

**Rule 803.** (1) "Class "K" fire" means a fire in cooking appliances that involve combustible vegetable or animal oils and fats.

(2) "Extinguisher" means a portable fire extinguisher that is carried or on wheels and operated by hand.

R 408.10804 Rescinded.

R 408.10805 Rescinded.

R 408.10807 Rescinded.

R 408.10808 Rescinded.

R 408.10811 Rescinded.

R 408.10812 Rescinded.

R 408.10813 Rescinded.

R 408.10814 Rescinded.

R 408.10821 Rescinded.

R 408.10822 Rescinded.

R 408.10823 Rescinded.

R 408.10824 Rescinded.

R 408.10825 Rescinded.

**R 408.10826 Class "K" extinguishers.**

**Rule 826.** (1) A class "K" extinguisher shall be provided for hazards where there is a potential for fires involving combustible vegetable or animal oils and fats.

(2) A placard shall be conspicuously placed near the extinguisher that states that the fire protection system shall be activated before using the fire extinguisher.

(3) A class "K" extinguisher shall be maintained within 30 feet, 9.15 meters from the hazards.

**R 408.10831 Location.**

**Rule 831.** In a location where a visual obstruction cannot be avoided, a sign, color symbol, or other means shall be used to indicate the extinguisher's location.

**R 408.10833 Installation.**

**Rule 833.** (1) An extinguisher shall be installed securely on a hanger, in a bracket, or mounted in a cabinet unless it is wheeled type or cart mounted. A means shall be used to indicate the location of an extinguisher mounted in a cabinet or on a shelf. The extinguisher shall be placed so that the operating instructions face outward.

(2) An extinguisher having a gross weight of not more than 40 pounds shall be installed so that the top is not more than 5 feet above the floor. An extinguisher having a gross weight of more than 40 pounds, except a wheeled type or cart mounted extinguisher, shall be installed so that the top is not more than 3 1/2 feet above the floor. An extinguisher, except a wheeled type or cart mounted extinguisher, shall be installed so that the bottom is not less than 4 inches from the floor.

R 408.10835 Rescinded.

R 408.10836 Rescinded.

**R 408.10837 Recharging.**

**Rule 837.** An employer maintaining their own extinguisher shall use recharging materials of the class specified on the extinguisher nameplate or recommended by the manufacturer for recharging.

R 408.10839 Rescinded.

# 1910 SUBPART L – FIRE PROTECTION

## Table of Contents:

<b><u>1910.155(c) Definitions applicable to the subpart.</u></b> .....	5
R 408.10803 Definitions C to E. ....	5
<b>1910.157 Portable fire extinguishers.</b> .....	7
1910.157(c) General requirements. ....	7
R 408.10831 Location.....	7
1910.157(d) Selection and distribution.....	7
R 408.10826 "Class K" extinguishers .....	7
R 408.10833 Installation .....	7
1910.157(e) Inspection, maintenance and testing. .	7
1910.157(f) Hydrostatic testing. ....	8
R 408.10837 Recharging .....	8
1910.157(g) Training and education. ....	9

## 1910.155(C) DEFINITIONS APPLICABLE TO THE SUBPART –

**1910.155(c)(2) *Aqueous film forming foam (AFFF)*** means a fluorinated surfactant with a foam stabilizer which is diluted with water to act as a temporary barrier to exclude air from mixing with the fuel vapor by developing an aqueous film on the fuel surface of some hydrocarbons which is capable of suppressing the generation of fuel vapors.

**1910.155(c)(3) *Approved*** means acceptable to the Assistant Secretary under the following criteria:

**1910.155(c)(3)(i)** If it is accepted, or certified, or listed, or labeled or otherwise determined to be safe by a nationally recognized testing laboratory; or

**1910.155(c)(3)(ii)** With respect to an installation or equipment of a kind which no nationally recognized testing laboratory accepts, certifies, lists, labels, or determines to be safe, if it is inspected or tested by another Federal agency and found in compliance with the provisions of the applicable National Fire Protection Association Fire Code; or

**1910.155(c)(3)(iii)** With respect to custom-made equipment or related installations which are designed, fabricated for, and intended for use by its manufacturer on the basis of test data which the employer keeps and makes available for inspection to the Assistant Secretary.

**1910.155(c)(3)(iv)** For the purposes of [paragraph \(c\)\(3\)](#) of this section:

**1910.155(c)(3)(iv)(A)** Equipment is listed if it is of a kind mentioned in a list which is published by a nationally recognized testing laboratory which makes periodic inspections of the production of such equipment and which states that such equipment meets nationally recognized standards or has been tested and found safe for use in a specified manner;

**1910.155(c)(3)(iv)(B)** Equipment is labeled if there is attached to it a label, symbol, or other identifying mark of a nationally recognized testing laboratory which makes periodic inspections of the production of such equipment, and whose labeling indicates compliance with nationally recognized standards or tests to determine safe use in a specified manner;

**1910.155(c)(3)(iv)(C)** Equipment is accepted if it has been inspected and found by a nationally recognized testing laboratory to conform to specified plans or to procedures of applicable codes; and

**1910.155(c)(3)(iv)(D)** Equipment is certified if it has been tested and found by a nationally recognized testing laboratory to meet nationally recognized standards or to be safe for use in a specified manner or is of a kind whose production is periodically inspected by a nationally recognized testing laboratory, and if it bears a label, tag, or other record of certification.

**1910.155(c)(3)(iv)(E)** Refer to [§ 1910.7](#) for definition of nationally recognized testing laboratory.

**1910.155(c)(4) *Assistant Secretary*** means the Assistant Secretary of Labor for Occupational Safety and Health or designee.

**1910.155(c)(7) *Carbon dioxide*** means a colorless, odorless, electrically nonconductive inert gas (chemical formula CO<sub>2</sub>) that is a medium for extinguishing fires by reducing the concentration of oxygen or fuel vapor in the air to the point where combustion is impossible.

**1910.155(c)(8) *Class A fire*** means a fire involving ordinary combustible materials such as paper, wood, cloth, and some rubber and plastic materials.

**1910.155(c)(9) *Class B fire*** means a fire involving flammable or combustible liquids, flammable gases, greases and similar materials, and some rubber and plastic materials.

**1910.155(c)(10) *Class C fire*** means a fire involving energized electrical equipment where safety to the employee requires the use of electrically nonconductive extinguishing media.

**1910.155(c)(11) *Class D fire*** means a fire involving combustible metals such as magnesium, titanium, zirconium, sodium, lithium and potassium.

**R 408.10803(1) "Class "K" fire"** means a fire in cooking appliances that involve combustible vegetable or animal oils and fats.

**1910.155(c)(12) *Dry chemical*** means an extinguishing agent composed of very small particles of chemicals such as, but not limited to, sodium bicarbonate, potassium bicarbonate, urea-based potassium bicarbonate, potassium chloride, or monoammonium phosphate supplemented by special treatment to provide resistance to packing and moisture absorption (caking) as well as to provide proper flow capabilities. Dry chemical does not include dry powders.

**1910.155(c)(13) *Dry powder*** means a compound used to extinguish or control Class D fires.

**1910.155(c)(14) *Education*** means the process of imparting knowledge or skill through systematic instruction. It does not require formal classroom instruction.

**R 408.10803(2) "Extinguisher"** means a portable fire extinguisher that is carried or on wheels and operated by hand.

**1910.155(c)(21) Foam** means a stable aggregation of small bubbles which flow freely over a burning liquid surface and form a coherent blanket which seals combustible vapors and thereby extinguishes the fire.

**1910.155(c)(23) Halon 1211** means a colorless, faintly sweet smelling, electrically nonconductive liquefied gas (chemical formula  $\text{CBrClF}_2$ ) which is a medium for extinguishing fires by inhibiting the chemical chain reaction of fuel and oxygen. It is also known as bromochlorodifluoromethane.

**1910.155(c)(24) Halon 1301** means a colorless, odorless, electrically nonconductive gas (chemical formula  $\text{CBrF}_3$ ) which is a medium for extinguishing fires by inhibiting the chemical chain reaction of fuel and oxygen. It is also known as bromotrifluoromethane.

**1910.155(c)(26) Incipient stage fire** means a fire which is in the initial or beginning stage and which can be controlled or extinguished by portable fire extinguishers, Class II standpipe or small hose systems without the need for protective clothing or breathing apparatus.

**1910.155(c)(27) Inspection** means a visual check of fire protection systems and equipment to ensure that they are in place, charged, and ready for use in the event of a fire.

**1910.155(c)(31) Maintenance** means the performance of services on fire protection equipment and systems to assure that they will perform as expected in the event of a fire. Maintenance differs from inspection in that maintenance requires the checking of internal fittings, devices and agent supplies.

**1910.155(c)(38) Sprinkler system** means a system of piping designed in accordance with fire protection engineering standards and installed to control or extinguish fires. The system includes an adequate and reliable water supply, and a network of specially sized piping and sprinklers which are interconnected. The system also includes a control valve and a device for actuating an alarm when the system is in operation.

**1910.155(c)(39) Standpipe systems.**

**1910.155(c)(39)(i) Class I standpipe system** means a 2 1/2" (6.3 cm) hose connection for use by fire departments and those trained in handling heavy fire streams.

**1910.155(c)(39)(ii) Class II standpipe system** means a 1 1/2" (3.8 cm) hose system which provides a means for the control or extinguishment of incipient stage fires.

**1910.155(c)(39)(iii) Class III standpipe system** means a combined system of hose which is for the use of employees trained in the use of hose operations and which is capable of furnishing effective water discharge during the more advanced stages of fire (beyond the incipient stage) in the interior of workplaces. Hose outlets are available for both 1 1/2" (3.8 cm) and 2 1/2" (6.3 cm) hose.

**1910.155(c)(41) Training** means the process of making proficient through instruction and hands-on practice in the operation of equipment, including respiratory protection equipment, that is expected to be used and in the performance of assigned duties.

## **1910.157 PORTABLE FIRE EXTINGUISHERS**

### **1910.157(c) General Requirements.**

**1910.157(c)(1)** The employer shall provide portable fire extinguishers and shall mount, locate and identify them so that they are readily accessible to employees without subjecting the employees to possible injury.

#### **R 408.10831 Location.**

**Rule 831.** In a location where a visual obstruction cannot be avoided, a sign, color symbol, or other means shall be used to indicate the extinguisher's location.

**1910.157(c)(2)** Only approved portable fire extinguishers shall be used to meet the requirements of this section.

**1910.157(c)(3)** The employer shall not provide or make available in the workplace portable fire extinguishers using carbon tetrachloride or chlorobromomethane extinguishing agents.

**1910.157(c)(4)** The employer shall assure that portable fire extinguishers are maintained in a fully charged and operable condition and kept in their designated places at all times except during use.

**1910.157(c)(5)** The employer shall remove from service all soldered or riveted shell self-generating soda acid or self-generating foam or gas cartridge water type portable fire extinguishers which are operated by inverting the extinguisher to rupture the cartridge or to initiate an uncontrollable pressure generating chemical reaction to expel the agent.

### **1910.157(d) Selection and distribution.**

**1910.157(d)(1)** Portable fire extinguishers shall be provided for employee use and selected and distributed based on the classes of anticipated workplace fires and on the size and degree of hazard which would affect their use.

**1910.157(d)(2)** The employer shall distribute portable fire extinguishers for use by employees on Class A fires so that the travel distance for employees to any extinguisher is 75 feet (22.9 m) or less.

**1910.157(d)(3)** The employer may use uniformly spaced standpipe systems or hose stations connected to a sprinkler system installed for emergency use by employees instead of Class A portable fire extinguishers, provided that such systems meet the respective requirements of [§ 1910.158](#) or [§ 1910.159](#), that they provide total coverage of the area to be protected, and that employees are trained at least annually in their use.

**1910.157(d)(4)** The employer shall distribute portable fire extinguishers for use by employees on Class B fires so that the travel distance from the Class B hazard area to any extinguisher is 50 feet (15.2 m) or less.

**1910.157(d)(5)** The employer shall distribute portable fire extinguishers used for Class C hazards on the basis of the appropriate pattern for the existing Class A or Class B hazards.

**1910.157(d)(6)** The employer shall distribute portable fire extinguishers or other containers of Class D extinguishing agent for use by employees so that the travel distance from the combustible metal working area to any extinguishing agent is 75 feet (22.9 m) or less. Portable fire extinguishers for Class D hazards are required in those combustible metal working areas where combustible metal powders, flakes, shavings, or similarly sized products are generated at least once every two weeks.

#### **R 408.10826 Class "K" extinguishers.**

**Rule 826.** (1) A class "K" extinguisher shall be provided for hazards where there is a potential for fires involving combustible vegetable or animal oils and fats.

(2) A placard shall be conspicuously placed near the extinguisher that states that the fire protection system shall be activated before using the fire extinguisher.

(3) A class "K" extinguisher shall be maintained within 30 feet, 9.15 meters from the hazards.

#### **R 408.10833 Installation.**

**Rule 833.** (1) An extinguisher shall be installed securely on a hanger, in a bracket, or mounted in a cabinet unless it is wheeled type or cart mounted. A means shall be used to indicate the location of an extinguisher mounted in a cabinet or on a shelf. The extinguisher shall be placed so that the operating instructions face outward.

(2) An extinguisher having a gross weight of not more than 40 pounds shall be installed so that the top is not more than 5 feet above the floor. An extinguisher having a gross weight of more than 40 pounds, except a wheeled type or cart mounted extinguisher, shall be installed so that the top is not more than 3 1/2 feet above the floor. An extinguisher, except a wheeled type or cart mounted extinguisher, shall be installed so that the bottom is not less than 4 inches from the floor.

### **1910.157(e) Inspection, maintenance and testing.**

**1910.157(e)(1)** The employer shall be responsible for the inspection, maintenance and testing of all portable fire extinguishers in the workplace.



**1910.157(e)(2)** Portable extinguishers or hose used in lieu thereof under [paragraph \(d\)\(3\)](#) of this section shall be visually inspected monthly.

**1910.157(e)(3)** The employer shall assure that portable fire extinguishers are subjected to an annual maintenance check. Stored pressure extinguishers do not require an internal examination. The employer shall record the annual maintenance date and retain this record for one year after the last entry or the life of the shell, whichever is less. The record shall be available to the Assistant Secretary upon request.

**1910.157(e)(4)** The employer shall assure that stored pressure dry chemical extinguishers that require a 12-year hydrostatic test are emptied and subjected to applicable maintenance procedures every 6 years. Dry chemical extinguishers having non-refillable disposable containers are exempt from this requirement. When recharging or hydrostatic testing is performed, the 6-year requirement begins from that date.

**1910.157(e)(5)** The employer shall assure that alternate equivalent protection is provided when portable fire extinguishers are removed from service for maintenance and recharging.

**R 408.10837 Recharging.**

**Rule 837.** An employer maintaining their own extinguisher shall use recharging materials of the class specified on the extinguisher nameplate or recommended by the manufacturer for recharging.

R 408.10839 Rescinded.

**1910.157(f) Hydrostatic testing.**

**1910.157(f)(1)** The employer shall assure that hydrostatic testing is performed by trained persons with suitable testing equipment and facilities.

**1910.157(f)(2)** The employer shall assure that portable extinguishers are hydrostatically tested at the intervals listed in Table L-1 of this section, except under any of the following conditions:

**1910.157(f)(2)(i)** When the unit has been repaired by soldering, welding, brazing, or use of patching compounds;

**1910.157(f)(2)(ii)** When the cylinder or shell threads are damaged;

**1910.157(f)(2)(iii)** When there is corrosion that has caused pitting, including corrosion under removable name plate assemblies;

**1910.157(f)(2)(iv)** When the extinguisher has been burned in a fire; or

**1910.157(f)(2)(v)** When a calcium chloride extinguishing agent has been used in a stainless steel shell.

**1910.157(f)(3)** In addition to an external visual examination, the employer shall assure that an internal examination of cylinders and shells to be tested is made prior to the hydrostatic tests.

**Table L-1**

Type of extinguishers	Test interval (years)
Soda acid (soldered brass shells) (until 1/1/82)	(1)
Soda acid (stainless steel shell)	5
Cartridge operated water and/or antifreeze	5
Stored pressure water and/or antifreeze	5
Wetting agent	5
Foam (soldered brass shells) (until 1/1/82)	(1)
Foam (stainless steel shell)	5
Aqueous Film Forming foam (AFFF)	5
Loaded stream	5
Dry chemical with stainless steel	5
Carbon dioxide	5
Dry chemical, stored pressure, with mild steel, brazed brass or aluminum shells	12
Dry chemical, cartridge or cylinder operated, with mild steel shells	12



Halon 1211	12
Halon 1301	12
Dry powder, cartridge or cylinder operated with mild steel shells	12

<sup>1</sup> Extinguishers having shells constructed of copper or brass joined by soft solder or rivets shall not be hydrostatically tested and shall be removed from service by January 1, 1982. (Not permitted)

**1910.157(f)(4)** The employer shall assure that portable fire extinguishers are hydrostatically tested whenever they show new evidence of corrosion or mechanical injury, except under the conditions listed in paragraphs (f)(2)(i)–(v) of this section.

**1910.157(f)(5)** The employer shall assure that hydrostatic tests are performed on extinguisher hose assemblies which are equipped with a shut-off nozzle at the discharge end of the hose. The test interval shall be the same as specified for the extinguisher on which the hose is installed.

**1910.157(f)(6)** The employer shall assure that carbon dioxide hose assemblies with a shut-off nozzle are hydrostatically tested at 1,250 psi (8,620 kPa).

**1910.157(f)(7)** The employer shall assure that dry chemical and dry powder hose assemblies with a shut-off nozzle are hydrostatically tested at 300 psi (2,070 kPa).

**1910.157(f)(8)** Hose assemblies passing a hydrostatic test do not require any type of recording or stamping.

**1910.157(f)(9)** The employer shall assure that hose assemblies for carbon dioxide extinguishers that require a hydrostatic test are tested within a protective cage device.

**1910.157(f)(10)** The employer shall assure that carbon dioxide extinguishers and nitrogen or carbon dioxide cylinders used with wheeled extinguishers are tested every 5 years at 5/3 of the service pressure as stamped into the cylinder. Nitrogen cylinders which comply with [49 CFR 173.34\(e\)\(15\)](#) may be hydrostatically tested every 10 years.

**1910.157(f)(11)** The employer shall assure that all stored pressure and Halon 1211 types of extinguishers are hydrostatically tested at the factory test pressure not to exceed two times the service pressure.

**1910.157(f)(12)** The employer shall assure that acceptable self-generating type soda acid and foam extinguishers are tested at 350 psi (2,410 kPa).

**1910.157(f)(13)** Air or gas pressure may not be used for hydrostatic testing.

**1910.157(f)(14)** Extinguisher shells, cylinders, or cartridges which fail a hydrostatic pressure test, or which are not fit for testing shall be removed from service and from the workplace.

**1910.157(f)(15)**

**1910.157(f)(15)(i)** The equipment for testing compressed gas type cylinders shall be of the water jacket type. The equipment shall be provided with an expansion indicator which operates with an accuracy within one percent of the total expansion or .1 cc (.1 mL) of liquid.

**1910.157(f)(15)(ii)** The equipment for testing non-compressed gas type cylinders shall consist of the following:

**1910.157(f)(ii)(A)** A hydrostatic test pump, hand or power operated, capable of producing not less than 150 percent of the test pressure, which shall include appropriate check valves and fittings;

**1910.157(f)(ii)(B)** A flexible connection for attachment to fittings to test through the extinguisher nozzle, test bonnet, or hose outlet, as is applicable; and

**1910.157(f)(ii)(C)** A protective cage or barrier for personal protection of the tester, designed to provide visual observation of the extinguisher under test.

**1910.157(f)(16)** The employer shall maintain and provide upon request to the Assistant Secretary evidence that the required hydrostatic testing of fire extinguishers has been performed at the time intervals shown in Table L–1. Such evidence shall be in the form of a certification record which includes the date of the test, the signature of the person who performed the test and the serial number, or other identifier, of the fire extinguisher that was tested. Such records shall be kept until the extinguisher is hydrostatically retested at the time interval specified in Table L–1 or until the extinguisher is taken out of service, whichever comes first.

**1910.157(g) Training and education.**

**1910.157(g)(1)** Where the employer has provided portable fire extinguishers for employee use in the workplace, the employer shall also provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with incipient stage fire fighting.

**1910.157(g)(2)** The employer shall provide the education required in [paragraph \(g\)\(1\)](#) of this section upon initial employment and at least annually thereafter.

**1910.157(g)(3)** The employer shall provide employees who have been designated to use fire fighting equipment as part of an emergency action plan with training in the use of the appropriate equipment.

**1910.157(g)(4)** The employer shall provide the training required in [paragraph \(g\)\(3\)](#) of this section upon initial assignment to the designated group of employees and at least annually thereafter.

[45 FR 60708, Sept. 12, 1980; 46 FR 24557, May 1, 1981, as amended at 51 FR 34560, Sept. 29, 1986; 61 FR 9227, March 7, 1996; 67 FR 67964, Nov. 7, 2002]



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