

Oregon OSHA Adopted Changes
Portable Fire Extinguishers
Division 2/L, General Industry/Fire Protection

OR-OSHA Administrative Order 7-2007
Filed and Effective November 8, 2007

Text adopted/added is in **bold and underlined**.

Text repealed/removed is in [~~brackets with line through~~].

437-002-0187 PORTABLE FIRE EXTINGUISHERS

This rule applies to the location, use and maintenance of portable fire extinguishers. This rule does not apply to vehicles. (NOTE: The Oregon Office of State Fire Marshal and your local fire marshal have rules that apply to portable fire extinguishers.)

These exemptions do not apply if another Oregon OSHA standard requires you to provide portable fire extinguishers.

EXEMPTIONS:

You are exempt from these rules if:

Your portable fire extinguishers are not accessible to employees.

AND

You have a written fire safety policy that requires the immediate and total evacuation of employees in the event of fire. (NOTE: This fire safety policy is not the same as your emergency action plan and fire prevention plan.)

AND

You have an emergency action plan and fire prevention plan that conform to OAR 437-002-0042 and OAR 437-002-0043.

PARTIAL EXEMPTION:

If extinguishers are present and accessible but you do not intend them for use by employees and you have an emergency action plan and fire prevention plan that meet OAR 437-002-0042 and 437-002-0043, then only paragraphs 2, 3, and 4 apply.

See Non Mandatory Appendix A – Summary of exemptions and rule requirements for 437-002-0187.

(1) If you provide extinguishers, you must:

(a) Never provide or allow the use of extinguishers with dangerous or banned agents like carbon tetrachloride or chlorobromomethane.

(b) Never provide or allow the use of soda-acid foam, loaded stream, anti-freeze and water (inverting type) extinguishers.

NOTE: Paragraph (c) below does not apply to extinguishers for use outside buildings.

EXEMPTION: You are exempt from the maximum travel distance requirements in Table 1 of this rule if you have an emergency action plan that complies with OAR 437-002-0042, designates which employees are the only ones authorized to use the available fire extinguishers, and requires all other employees to evacuate.

(c) Provide and place the correct type and size fire extinguisher according to Table 1.

Table 1

<u>Type of fire hazard</u>	<u>Maximum travel distance to an extinguisher</u>
<u>Wood, cloth, paper, rubber (Class A fires)</u>	<u>No more than 75 feet</u> <u>NOTE: You may use adequately placed standpipes or hose stations instead of Class A extinguishers if they comply with OAR 437-002-1910.158.</u>
<u>Liquids, grease, gases (Class B fires)</u>	<u>No more than 50 feet</u> <u>NOTE: You may choose smaller extinguishers than normally required but then the spacing cannot be more than 30 feet.</u>
<u>Live electrical equipment & circuits (Class C fires)</u>	<u>Distribute any Class C portable fire extinguishers according to the location and size of the electrical hazard.</u> <u>NOTE: If the equipment is not live you may use a Class A or Class B extinguisher.</u>
<u>Powder, flakes & residue from combustible metals, like magnesium & titanium that build up over a 2-week period. (Class D fire hazards)</u>	<u>No more than 75 feet.</u>

(A) Mount extinguishers in a manner appropriate for their type and location. Do not allow extinguishers to sit on the floor, shelves or furniture.

(B) Identify extinguisher locations with signs appropriate for their location or with other marking unique to fire extinguishers.

(C) Never block access to extinguishers.

(2) Do a monthly visual check of each extinguisher or hose system.

(a) Be sure the extinguishers have a full charge and no defects that would prevent effective use.

(b) Remove and replace any extinguisher that is not fully operable.

(c) Repair defective hose systems immediately.

(3) Follow the manufacturer's instructions for maintenance and inspection or paragraphs (4) and (5), whichever is appropriate for your extinguisher.

(4) Do a full annual maintenance check on each extinguisher.

NOTE: A maintenance check includes inspecting and/or testing external and internal parts, checking the quantity and quality of the contents and assuring operational capability. A qualified person must do the maintenance check.

(a) Use only persons deemed qualified by the Oregon Office of State Fire Marshal or local fire authorities to do maintenance checks. Contact them for details.

(b) Keep a record of the maintenance check until a new check record replaces it. The record must be available to OR-OSHA on request.

(c) Provide replacement extinguishers or some method of coverage for the effected area while extinguishers are out of service for the maintenance check.

(5) Assure a hydrostatic test of each extinguisher at intervals in Table 2 or when the extinguisher shows corrosion or physical damage.

(a) Use only a qualified person to do hydrostatic testing.

Table 2
Hydrostatic Test Table

<u>Type of Extinguisher</u>	<u>Test Interval (Years)</u>
<u>Stored pressure water and/or antifreeze</u>	<u>5</u>
<u>Wetting agent</u>	<u>5</u>
<u>Foam (stainless steel shell)</u>	<u>5</u>
<u>Aqueous film forming form (AFFF)</u>	<u>5</u>
<u>Loaded stream</u>	<u>5</u>
<u>Dry chemical with stainless steel</u>	<u>5</u>
<u>Carbon dioxide</u>	<u>5</u>
<u>Dry chemical, stored pressure, with mild steel, brazed brass or aluminum shells</u>	<u>12</u>
<u>Halon 1211</u>	<u>12</u>
<u>Halon 1301</u>	<u>12</u>
<u>Dry powder, cartridge or cylinder operated, with mild steel shell</u>	<u>12</u>
<u>Note: Do not do hydrostatic testing on stored pressure water extinguishers with fiberglass shells pre-1976.</u>	

(b) Keep a record of the hydrostatic test until replaced by a new record or the extinguisher is no longer in use. The record must have at least the date of test, test pressure, serial number of the extinguisher (or other unique identifier), person or company doing the test.

(c) Every six years, empty and do applicable maintenance on stored pressure extinguishers that require a 12-year hydrostatic test.

(A) The six-year requirement begins again after recharging or hydrostatic testing.

(6) Train employees in the safe use of extinguishers and/or standpipe hoses when you require or allow their use. Training must be at first hiring and then annually and must include:

(a) The general methods and tactics of using an extinguisher.

(b) The hazards of using an extinguisher on early stage fires.

(c) Hazards associated with using standpipe hoses.

APPENDIX A
Non Mandatory

Summary of exemptions and rule requirements for 437-002-0187

If you choose one of the exemptions found at the beginning of the rule, this table summarizes requirements you must meet to be in compliance with other rules or the parts of this rule from which you are not exempt.

Find your circumstances in the left column and the matching requirements or exemption in the columns under each subject.

	<u>Emergency Action Plan</u>	<u>Fire Prevention Plan</u>	<u>437-002-0187 Requirements</u>	<u>Written Fire Policy</u>
<u>Total Evacuation - Extinguishers not accessible</u>	<u>Required</u>	<u>Required</u>	<u>Exempt</u>	<u>Required</u>
<u>Evacuate - Extinguishers accessible but not intended for use</u>	<u>Required</u>	<u>Required</u>	<u>(2) through (5) apply</u>	<u>Not Required</u>
<u>Evacuate - Only designated employees use extinguishers</u>	<u>Required</u>	<u>Not Required</u>	<u>All apply except travel distances in Table 1</u>	<u>Not Required</u>
<u>Everybody can use extinguishers</u>	<u>Not required unless any employees will evacuate</u>		<u>All</u>	<u>Not Required</u>

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist.: OR-OSHA Admin. Order 7-2007, f. 11/8/07, ef. 11/8/07.

~~[§1910.157 Portable Fire Extinguishers.]~~

~~[(a) Scope and application. The requirements of this section apply to the placement, use, maintenance, and testing of portable fire extinguishers provided for the use of employees. Paragraph (d) of this section 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 which meet the requirements of §1910.38, then only the requirements of paragraphs (e) and (f) of this section apply. NOTE: 1910.38 is now 437-002-0042 and 0043.]~~

~~[(b) Exemptions.]~~

~~[(1) 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 meet the requirements of §1910.38, and when extinguishers are not available in the workplace, the employer is exempt from all requirements of this section unless a specific standard in Part 1910 requires that a portable fire extinguisher be provided. NOTE: 1910.38 is now 437-002-0042 and 0043. (2) Where the employer has an emergency action plan meeting the requirements of §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 paragraph (d) of this section. NOTE: 1910.38 is now 437-002-0042 and 0043.]~~

~~[(c) General requirements.]~~

~~[(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.]~~
~~[(2) Only approved portable fire extinguishers shall be used to meet the requirements of this section.]~~
~~[(3) The employer shall not provide or make available in the workplace portable fire extinguishers using carbon tetrachloride or chlorobromomethane extinguishing agents.]~~
~~[(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.]~~
~~[(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.]~~

~~[(d) Selection and distribution.]~~

~~[(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.]~~

~~[(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.]~~

~~[(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.]~~

~~[(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.]~~

~~[(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.]~~

~~[(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 2 weeks.]~~

~~[(e) Inspection, maintenance and testing.]~~

~~[(1) The employer shall be responsible for the inspection, maintenance and testing of all portable fire extinguishers in the workplace.]~~

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

~~[(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 1 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.]~~

~~[(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 nonrefillable disposable containers are exempt from this requirement. When recharging or hydrostatic testing is performed, the 6-year requirement begins from that date.]~~

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

~~[(f) Hydrostatic testing.]~~

~~[(1) The employer shall assure that hydrostatic testing is performed by trained persons with suitable testing equipment and facilities.]~~

~~[(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:]~~

~~[(i) When the unit has been repaired by soldering, welding, brazing, or use of patching compounds;]~~

- ~~[(ii) When the cylinder or shell threads are damaged;]~~
- ~~[(iii) When there is corrosion that has caused pitting, including corrosion under removable name plate assemblies;]~~
- ~~[(iv) When the extinguisher has been burned in a fire; or]~~
- ~~[(v) When a calcium chloride extinguishing agent has been used in a stainless steel shell.]~~
- ~~[(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-4

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

~~-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)~~

- ~~[(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) through (v) of this section.]~~
- ~~[(5) The employer shall assure that hydrostatic tests are performed on extinguisher hose assemblies which are equipped with a shutoff 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.]~~
- ~~[(6) The employer shall assure that carbon dioxide hose assemblies with a shutoff nozzle are hydrostatically tested at 1,250 psi (8,620 kPa).]~~
- ~~[(7) The employer shall assure that dry chemical and dry powder hose assemblies with a shutoff nozzle are hydrostatically tested at 300 psi (2,070 kPa).]~~
- ~~[(8) Hose assemblies passing a hydrostatic test do not require any type of recording or stamping.]~~
- ~~[(9) The employer shall assure that hose assemblies for carbon dioxide extinguishers that require a hydrostatic test are tested within a protective cage device.]~~
- ~~[(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.]~~

~~[(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.]~~

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

~~[(13) Air or gas pressure may not be used for hydrostatic testing.]~~

~~[(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.]~~

~~[(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 1 percent of the total expansion or .1 cc (.1 mL) of liquid.]~~

~~[(ii) The equipment for testing noncompressed gas type cylinders shall consist of the following:]~~

~~[(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;]~~

~~[(B) A flexible connection for attachment to fittings to test through the extinguisher nozzle, test bonnet, or hose outlet, as is applicable; and]~~

~~[(C) A protective cage or barrier for personal protection of the tester, designed to provide visual observation of the extinguisher under test.]~~

~~[(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.]~~

~~[(g) Training and education.]~~

~~[(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.]~~

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

~~[(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.]~~

~~[(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]]~~

~~[Stat. Auth.: ORS 654.025(2) and 656.726(4).]~~

~~[Stats. Implemented: ORS 654.001 through 654.295.]~~

~~[Hist: OR-OSHA Admin. Order 14-1993, f. 8/27/93, ef. 11/1/93.]~~

~~[OR-OSHA Admin. Order 4-1997, f. 4/2/97, ef. 4/2/97.]~~

~~[OR-OSHA Admin. Order 12-2001, f. 10/26/01, ef. 10/26/01.]~~