

Portable Fire Extinguisher Program

Effective Date: 2014

Revision #:

OSHA

Reference Standard

Occupational Safety and Health Administration: Portable Fire Extinguishers 29 CFR 1910.157.

Purpose

This procedure establishes minimum standards for the placement, use, maintenance and testing of portable fire extinguishers. Preserving life must always be considered as the primary goal when dealing with emergency response activities including the use of portable fire extinguishers.

Scope

This procedure applies to all of company employees, contractors and vendors performing work on company property, and all other individuals who are visiting or have business with our company.

Responsibilities

- Management is responsible for the development and review of this program.
- Management is responsible for appropriate employee training.
- Management and supervisors are responsible for the enforcement of this program.
- Employees must comply with all procedures outlined in this policy.
- Contractors and vendors must comply with all procedures outlined in this policy.

Definitions

Agent: the contents of a fire extinguisher that extinguishes a fire upon application. Agent types include:

- Water and water-based foam;
- Ordinary dry chemical (sodium bicarbonate base) and purple K (potassium bicarbonate base);
- Multi-purpose dry chemical (monoammonium phosphate base);
- Inert gas (carbon dioxide);
- Halon;
- Halon replacement; and
- Dry powder (various dry compounds for fighting combustible metal fires).

Class: the class of fire indicates the type of fuel that is burning. Extinguisher classes are set to match the most effective agent for each fuel class. Extinguisher class labels are useful because agents are not effective on all types of fire. Fire Classes are:

- Class A, ordinary combustibles (wood, paper, etc.);
- Class B, flammable and combustible liquids and gasses;
- Class C, energized electrical equipment;
- Class D, combustible metals; and

- Class K, cooking oils and fats.

Contractor: a non-company employee being paid to perform work in the facility.

Incipient Stage Fire: the beginning or initial stage of a fire. Generally, the heat and smoke production and fire growth are manageable. If an employee believes that a fire is too big, too smoky or too hot, the fire is **not** an incipient stage fire.

PASS: an acronym that describes the main steps in fire extinguisher operation: **P**ull, **A**im, **S**queeze, **S**weep.

Portable Fire Extinguisher: a unit designed for fire extinguishment. The unit contains a fire extinguishing agent, expelled by pressure or a manual pump, and can be generally carried by hand. (Note: Class D agents can be stored and applied with a scoop or shovel and can be stored in a container other than an extinguisher.)

UL: underwriter laboratories, a testing and certification laboratory.

Vendor: a non-company employee being paid to perform a service in our facility.

Wheeled Fire Extinguisher: a fire extinguisher that is sufficiently heavy to require a wheeled carriage. The weight required to use a wheeled carriage varies by extinguisher class:

Agent	Weight
Dry chemical and dry powder	50-350 lbs.
Foam	33 gal.
Carbon dioxide	50-100 lbs.
Halon and halon replacements	50 lbs. or more

Procedure

Fire Extinguisher Selection

Fire extinguishers must be selected based upon the hazard(s) present in the area and the expected types of fires that could result from them. Both the type and capacity of the fire extinguisher must be determined by the potential hazard. All fire extinguishers provided in our facility must be UL approved.

Selection Guide:

Fire Hazards Class	Agent Selection	Fire Hazards Class	Agent Selection
Class A	1. Water 2. Foam 3. Multipurpose dry chemical 4. Halon 5. Halon replacement	Class C	1. Ordinary dry/Purple K chemical 2. Multipurpose dry chemical 3. Halon 4. Halon substitutes Carbon dioxide
Class B	1. Ordinary dry/Purple K chemical 2. Multi-purpose dry chemical 3. Halon 4. Halon substitutes 5. Carbon dioxide	Class D	Dry powder selected for the specific combustible metal
		Class K	Wet chemical (potassium-based liquids)

Placement

Placement of fire extinguishers must conform with the following guidelines:

1. Travel Distance:

- a. Class A – 75 feet or less;
 - b. Class B – 50 feet or less;
 - c. Class C – based on the appropriate pattern for existing class A or B hazards;
 - d. Class D – 75 feet or less; and
 - e. Class K – Close to the hazard;
2. Hazard—travel distance to a fire extinguisher for high hazard areas must be lower than the maximum allowed travel distance;
 3. Ease of access—fire extinguishers in areas that are difficult to access must be placed closer so that response to a fire must not be delayed;
 4. Permanent location—all fire extinguishers must have a permanent location consisting of a wall mount, a fire extinguisher cabinet or a vehicle bracket;
 5. Damage—all fire extinguishers must be placed in locations that minimizes the possibility of damage or obstruction by traffic or work activities in the area; and
 6. Marking—all fire extinguisher locations must be conspicuously marked with signs or other indicators.

Care and Maintenance

1. Keep fire extinguishers unobstructed and in clear view at all times.
2. Trained facility personnel should inspect fire extinguishers periodically and maintain a written record of their inspection. The inspection must verify that each fire extinguisher:
 - Is in its proper location;
 - Is in adequate physical condition;
 - Has a pressure gage within operable range (if so equipped);
 - Has an unobstructed nozzle; and
 - Has an adequate amount of agent (lift the extinguisher to verify it is not too light, a possible indication the fire extinguisher may have lost some of its contents).
3. A certified fire extinguisher contractor must inspect each fire extinguisher every year. Keep record of these inspections and any repairs that derive from them.
4. Remove from service any fire extinguisher after it is used, until it is inspected and recharged by the contractor.
5. Remove from service any fire extinguisher if it is damaged, involved in an incident where damage could result or if the extinguisher shows signs of corrosion, until it is inspected and recharged by the contractor.
6. Label or make sure that each fire extinguisher is labeled with its operating instructions and the class of fire(s) that it is designed to fight.
7. Make sure that all stored pressure dry chemical extinguishers that require a 12-year hydrostatic test are emptied and subjected to applicable maintenance procedures every 6 years.
8. All portable extinguishers shall be hydrostatically tested at the intervals listed in the following table:

<i>Type of Extinguisher</i>	<i>Test Interval (Years)</i>
Soda acid (stainless steel shell)	5
Cartridge operated water and/or antifreeze	5
Stored pressure water and/or antifreeze	5
Wetting agent	5

Type of Extinguisher	Test Interval (Years)
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

Exceptions: hydrostatic testing may be required more frequently when:

- The cylinder or shell threads are damaged;
- There is corrosion that has caused pitting (including corrosion under removable name plate assemblies);
- The extinguisher has been burned in a fire; or
- A calcium chloride extinguishing agent has been used in a stainless steel shell.

Fire Extinguisher Use

1. *There is nothing in our facility that is worth a human life.* No employee is required to use a fire extinguisher. Operating a fire extinguisher is a voluntary action.
2. Only trained personnel are authorized to use a portable fire extinguisher.
3. Fire extinguishers must only be used on incipient stage fires.
4. When using a fire extinguisher:
 - Alert employees who are at immediate risk from the fire;
 - Activate the facility fire alarm;
 - Use the PASS acronym for operation; and
 - Report all fire extinguisher use to the program administrator.
5. Operational safety rules for fire extinguisher use:
 - Fight only incipient stage fires;
 - Use a fire extinguisher that is approved for the class of fire you are trying to extinguish;
 - Always keep an exit path open behind you;
 - Stay low to avoid heat and smoke;
 - Do not turn your back on a fire, even after you think you have extinguished it; and
 - Avoid breathing smoke; ventilate the area after extinguishing the fire.

Training

1. Only trained and authorized employees are allowed to use fire extinguishers in the facility.
2. Employees will receive training after they are authorized to use fire extinguishers and become familiar with the hazards involved with incipient stage firefighting. Training will also be repeated annually for all authorized personnel.
3. Employees who are not authorized to use fire extinguishers must be advised that their only duties in a fire are: notification and evacuation.
4. Training will consist of classroom training and can be supplemented with hands on training when necessary. In all cases, employee safety will be stressed over property conservation. Additional training will be provided for any personnel who are assigned to operate wheeled fire extinguishers.

Revision History Record:

Revision Number	Section	Revised By	Description
0	NA	NA	Original document.



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