

No. 7: Fire Extinguishers

Introduction

When was the last time you used a fire extinguisher? For most firefighters this question can be a very thought provoking one; as many do not use them that often. This weekly drill covers some of the basic principles for using portable fire extinguishers.

Oxygen, heat, fuel, and a chemical chain reaction, otherwise known as the fire tetrahedron are needed to have a fire. Remove any one of these and the fire will extinguish and that's what this portable unit is designed to do when used properly.

Types of Extinguishers

Fires are classified according to the type of fuel that is burning. These classifications are:

- **Class A fires** - ordinary materials like burning paper, lumber, cardboard, plastics etc.
- **Class B fires** - flammable or combustible liquids such as gasoline, kerosene, and common organic solvents used in the laboratory.
- **Class C fires** - energized electrical equipment, such as appliances, switches, panel boxes, power tools, hot plates and stirrers. Water can be a dangerous extinguishing medium for class C fires because of the risk of electrical shock.
- **Class D fires** - combustible metals, such as magnesium, titanium. These materials burn at high temperatures and will react violently with water, air, and/or other chemicals. Handle with care!!
- **Class K fires** - kitchen fires. This class was added to the NFPA portable extinguishers Standard 10 in 1998. Kitchen extinguishers installed before June 30, 1998 are "grandfathered" into the standard.

There are many types of fire extinguishers currently being used. Some of the more common ones found are:

- **Stored pressure** - this is probably the most common extinguisher used by many people in their homes
 - **Cartridge style** - this has slowly been replaced by the stored pressure, but is still found in many industrial settings
 - **Pump type** - used mostly by forestry personnel
- Transporting a fire extinguisher can be accomplished by one of two methods, carrying by hand or pulled on wheels. The size and weight of the extinguisher will dictate which method will be used.



Photo by Glen E. Ellman/FortWorthFire.com

Common agents used in each fire extinguisher are:

- **Water** - used on Class A fires only
- **Carbon Dioxide** - used on Class B and C fires
- **Dry Chemical** - used on A,B,C or B and C fires depending on the agent. Check the label before using.
- **Dry Powder** - used on Class D fires
- **AFFF** - is a foam used on Class B fires
- **Halon Agents** - not very widely used anymore

It's easy to remember how to use a fire extinguisher if you remember the acronym PASS: P - pull the pin, A - aim the nozzle, S - squeeze the handle, S - sweep the nozzle.

When conducting inspections, firefighters should be able to identify the following items:

1. Any damage to the cylinder, hose, or nozzle
2. Whether the cylinder is empty
3. Is it properly pressurized
4. Is it within the hydrostatic dates for the cylinder
5. Has it been inspected and tagged
6. Is it easily accessible

After reviewing the basic elements of extinguishers it would be nice to have them demonstrate their technique in the use of the fire extinguisher. This can be accomplished in a number of ways, using a simulator designed for this type of exercise or the using small fires in a trash can or hopper.

As is the case in all training, safety comes first. Never turn your back on the fire once you have applied the extinguishing agent on the fire, back away slowly being ready to apply more agent should the need arise.

-Prepared by Russell Merrick/Firehouse.com

For the most up to date news and training opportunities, visit www.Firehouse.com