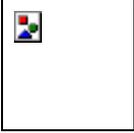


# Classes of Fire

There is a universal system to describe different types of fires. This system incorporates the use of letters, colors, and symbols to help users select an extinguisher suitable for the type of material involved in the fire.



Class A: Ordinary combustibles, such as wood, cloth, paper, rubber, many plastics, and other common materials that burn easily.



Class B: Flammable liquids. Includes gasoline, oil, grease, tar, oil-based paint, lacquer, and flammable gas.



Class C: Electrical equipment, such as wiring, fuse boxes, circuit breakers, machinery and appliances.

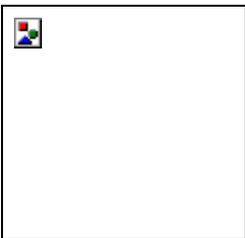


Class D: Combustible metals. Includes magnesium, aluminum, lithium, and other combustible metals or metal dust.



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## Types of Fire Extinguishers



There are many different types of extinguishers. It is essential that you familiarize yourself with the location and operation of fire extinguishers in your home or workplace!



### Stored-Pressure Water Extinguishers:

These extinguishers are suitable for use on Class A fires **only** (ordinary combustibles). **Caution: DO NOT use these extinguishers on Class B,C or D fires!** Standard water extinguishers contain 2 1/2 gallons of water. Under normal conditions, stream reach is 15-30 feet. Discharge time is 30-60 seconds. These extinguishers must be protected against freezing if they will be exposed to temperatures less than 40 degrees F (4 degrees C).

### Film-Forming-Fluoroprotein (FFFP) Foam Extinguishers:

These extinguishers are designed for use on Class A and B fires. They are essentially 2 1/2 gallon water extinguishers with a FFFP foam additive. When using this type of extinguisher on a Class B fire, you must be careful to avoid splashing liquid fuels. The foam has the ability to make water float on fuels that are lighter than water.

### Halon 1211 Fire Extinguishers:

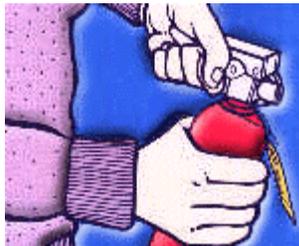
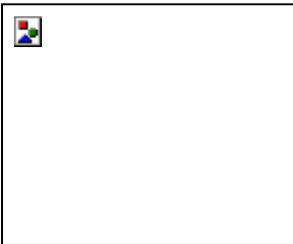
Halon 1211, or bromochlorodifluoromethane extinguishers, are primarily designed for Class B and C fires. Hand carried extinguishers are available in sizes from 2 1/2 to 22 pounds. **Caution: when used in a confined area, halon can cause dizziness and loss of coordination. You should immediately evacuate an area after using an extinguisher of this type.** Larger wheeled units are available up to 150 pounds. Stream reach is about 8 to 18 feet. Discharge time is dependent on the size of extinguisher.

### Dry Chemical Extinguishers (Hand Carried):

Dry chemical fire extinguishers are the most common extinguishers at Davis-Monthan AFB. They are two types available: those rated for Class B and C fires, and those rated for Class A, B, and C fires. These extinguishers are available from 2 1/2 to 30 pounds. **Caution: when used indoors, these extinguishers will produce a thick cloud of dust, which obscures vision and may cause choking.** They have a range of 5-20 feet, although they can be easily affected by wind. Discharge time is 10-25 seconds.

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## Using Hand-Held Fire Extinguishers



### Extinguishers have their limits

A portable fire extinguisher can save lives and property by putting out a small fire or containing it until the Fire Department arrives. Portable extinguishers are not designed to fight a large or spreading fire. Even against small fires, they are useful only under the following conditions:

- An extinguisher must be large enough for the fire at hand. It must be available and in working order, fully charged.

- The operator must know how to use the extinguisher quickly, without taking time to read directions in an emergency.
- The operator must be strong enough to lift and operate the extinguisher.



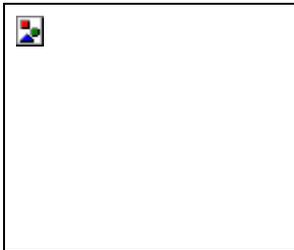
It's easy to remember how to use a fire extinguisher- simply follow the steps- "P-A-S-S" **P**ull the **P**in: Pull the pin at the top of the extinguisher that keeps the handle from being pressed. Break the plastic seal as the pin is pulled.

**A**im: Aim the nozzle or outlet toward the fire. Some hose assemblies are clipped to the extinguisher body. Release the hose and point.

**S**queeze: Squeeze the handle to release the extinguishing agent. The handle can be released to stop the discharge at any time. Before approaching the fire, try a very short test burst to ensure proper operation.

**S**weep: Sweep from side to side at the **base** of the fire until it is out. After the fire is out, watch for remaining smoldering hot spots or possible reflash of flammable liquids. *Make sure the fire is out.*

## When to Fight a Fire



Be certain to report any fire **before** attempting to extinguish it!

Fight a fire only if:

- The Fire Department has been called.
- Everyone has left or is leaving the building.
- The fire is small and confined to the immediate area where it started.
- You can fight the fire with your back to a safe escape route.
- Your extinguisher is rated for the type of fire you are fighting, and is in good working order.
- You have had training in use of the extinguisher and are confident that you can operate it effectively.

If you have the slightest doubt about whether or not to fight the fire- **DON'T!** Instead, get out, and close the door behind you.

Do not fight a fire if:

- The fire is spreading beyond the immediate area where it started, or is already a large fire.
- The fire could block your escape route.

- You are unsure of the proper operation of the extinguisher.
- You are in doubt whether the extinguisher you are holding is appropriate for the type of fire.

If any of these conditions are true, leave immediately, close off the area, and leave the fire to the Fire Department.

## Inspection and Maintenance

The National Fire Protection Association (NFPA) sets the standard for fire extinguishers in the regulation NFPA 10. This section will briefly explain the inspection and maintenance requirements for fire extinguishers.

### Inspection

An inspection is a "quick check" that an extinguisher is available and will operate. It is intended to give reasonable assurance that the fire extinguisher is fully charged and operable. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious or physical damage or condition to prevent its operation. Fire extinguishers should be inspected when they are initially placed in service and thereafter at 30-day intervals. They may require more frequent inspections if circumstances dictate.

Inspection Procedures:

1. Located in designated place
2. No obstruction to access or visibility
3. Operating instructions on nameplate legible and facing outward
4. Safety seals and tamper indicators not broken or missing.
5. Fullness determined by weighing or "hefting".
6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle.
7. Pressure gauge reading or indicator in the operable range or position. *Note: Internal pressure is affected by temperature.*
8. Condition of tires, wheels, carriage, hose, and nozzle checked (for wheeled units).

Personnel making inspections should keep a record of inspections, including those found to require corrective action. The record should include the date the inspection was performed, and the identity of the person conducting the inspection.

### Maintenance

Maintenance intervals begin on the date of manufacture, which can usually be found on the extinguisher nameplate.

Dry Chemical	Stored-Pressure Water	Foam (FFFP)	Halon 1211
Monthly inspection (by user)	Monthly inspection (by user)	Monthly inspection (by user)	Monthly inspection (by user)
Yearly maintenance	Yearly maintenance	Yearly maintenance	Yearly maintenance
6-year maintenance	Hydrostatic test (every 5 years)	Foam replace (every 3 years)	6-year maintenance
Hydrostatic test (every 12 years)		Hydrostatic test (every 5 years)	Hydrostatic test (every 12 years)

If an extinguisher has received maintenance, it should bear a tag or label indicating the type and date of maintenance and that identifies the person or company who performed the service.