




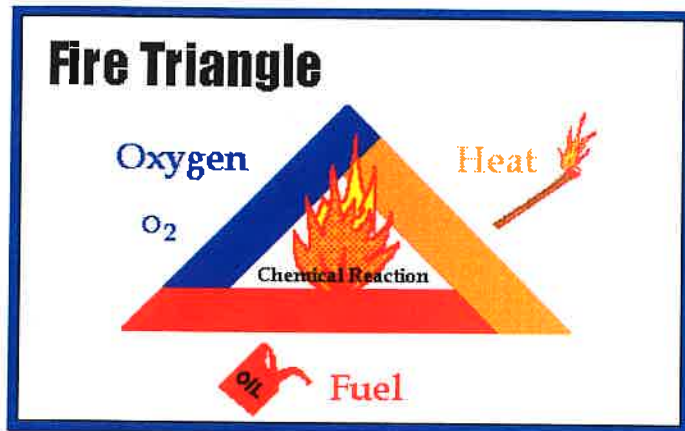
**FIRE EXTINGUISHER
TRAINING**



Training - Fire Extinguisher Training

| Name: OPS-TRA-05 | | Title: Fire Extinguisher Training | | | | | |
|---|-------------|-----------------------------------|------------------|-----------------------|-------------------------|---------------|-----------|
| Dept Owner: OPS | | | | Sensitivity: Internal | | | |
| Apply Region: to:  | | Division: Well Services | | Function: Operations | | | |
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| 1 | 03-Sept-19 | Initial Release | | T.Russell | J.Enerson B.Hartstok | 05-Sept-19 | DMOC-0429 |

Fire safety, at its most basic, is based upon the principle of keeping fuel sources and ignition sources separate.



Three things must be present at the same time to produce fire:

1. Enough Oxygen to sustain combustion
2. Enough Heat to reach ignition temperature
3. Some Fuel or combustible material

Together, they produce the chemical reaction that is fire. Take away any of these things and the fire will be extinguished.



FUEL CLASSIFICATIONS

Fires are classified according to the type of fuel that is burning. If you use the wrong type of extinguisher on the wrong class of fire, you might make matters worse. It is very important to understand the four different fire (fuel) classifications:



Class A: Wood, paper, cloth, trash, plastics—solids that are not metals.



Class B: Flammable liquids—gasoline, oil, grease, acetone. Includes flammable gases.



Class C: Electrical—energized electrical equipment. As long as it is “plugged in.”



Class D: Metals—potassium, sodium, aluminum, magnesium. Requires Metal-X, foam, and other special extinguishing agents.

Most fire extinguishers will have a pictograph label telling you which types of fire the extinguisher is designed to fight.

For example, a simple water extinguisher might have a label like this, which means it should only be used on Class A fires.





TYPES OF FIRE EXTINGUISHERS

Different types of fire extinguishers are designed to fight different classes of fire. The three most common types of fire extinguishers are:

1. Water (APW)

Large, silver fire extinguishers that stand about 2 feet tall and weigh about 25 pounds when full.

APW stands for "Air-Pressurized Water."

Filled with ordinary tap water and pressurized air, they are essentially large squirt guns.



APW's extinguish fire by taking away the "Heat" element of the Fire Triangle.

APW's are designed for Class A fires **only**: Wood, paper, cloth. Here are a couple of reasons you need to be careful about which extinguisher you use:

- ⊙ Using water on a flammable liquid fire could cause the fire to spread.
- ⊙ Using water on an electrical fire increases the risk of electrocution. If you have no choice but to use an APW on an electrical fire, make sure the electrical equipment is unplugged or de-energized.

2. Carbon Dioxide



The pressure in a CO₂ extinguisher is so great, bits of dry ice might shoot out of the horn!

CO₂ cylinders are red. They range in size from 5 pounds to 100 pounds or larger. On larger sizes, the horn will be at the end of a long, flexible hose.

CO₂'s are designed for Class B and C (flammable liquids and electrical sources) fires only!



CO₂'s will frequently be found in laboratories, mechanical rooms, kitchens, and flammable liquid storage areas.

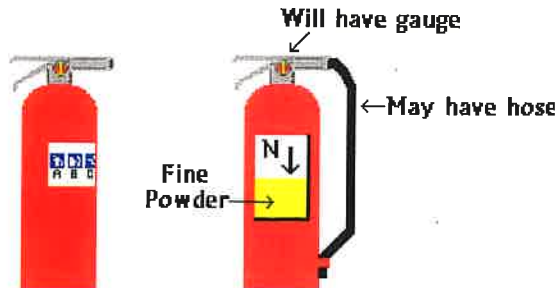
In accordance with NFPA regulations (and manufacturers' recommendations) all CO₂ extinguishers at OSU undergo hydrostatic testing and recharge every five years.

Carbon dioxide is a non-flammable gas that takes away the oxygen element of the Fire Triangle. CO₂ is very cold as it comes out of the extinguisher, so it cools the fuel as well.

A CO₂ may not be very effective in extinguishing a Class A fire because it may not be able to displace enough oxygen to successfully put the fire out. Class A materials may also smolder and re-ignite.



3. Dry Chemical (ABC, BC, DC)



ABC extinguishers are red. On lease, they range in size from 5 pounds to 30 pounds.

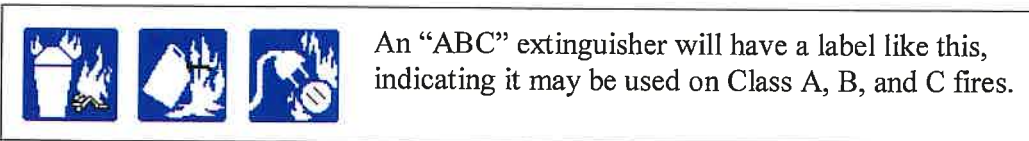
ABC extinguishers are filled with a fine, yellow powder. This powder is mostly composed of monoammonium phosphate. The extinguishers are pressurized with nitrogen.

Dry chemical extinguishers put out fire by coating the fuel with a thin layer of dust. This separates the fuel from the oxygen in the air. The powder also works to interrupt the chemical reaction of fire. These extinguishers are very effective at putting out fire.

Dry chemical extinguishers come in a variety of types. You may see them labeled:

- DC (for dry chemical)
- ABC (can be used on Class A, B, or C fires)
- BC (designed for use on Class B and C fires)

It is extremely important to identify which types of dry chemical fire extinguishers are located in your area!



You don't want to mistakenly use a "BC" extinguisher on a Class A fire thinking that it was an "ABC" extinguisher.

Dry chemical extinguishers with powder designed for Class B and C fires ("BC" extinguishers) may be in places such as commercial kitchens and areas with flammable liquids.

You will find ABC's in each piece of equipment, shops and offices.



HOW TO USE A FIRE EXTINGUISHER

It is easy to remember how to use a fire extinguisher if you remember the acronym, "PASS."

| | |
|--|--|
| <p>Pull</p> <p>Aim</p> <p>Squeeze</p> <p>Sweep</p> | |
|--|--|

| | |
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| <p>Pull the pin</p> <p>This will allow you to discharge the extinguisher.</p> | |
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| | |
|---|--|
| <p>Aim at the base of the fire</p> <p>Hit the fuel...if you aim at the flames, the extinguishing agent will pass right through and do no good.</p> | |
|---|--|

| | |
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| <p>Squeeze the top handle</p> <p>This depresses a button that releases the pressurized extinguishing agent.</p> | |
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| <p>Sweep from side-to-side until the fire is completely out.</p> <p>Start using the extinguisher from a safe distance away and then slowly move forward. Once the fire is out, keep an eye on the area in case it re-ignites.</p> | |
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RULES FOR FIGHTING FIRES

Fires can be very dangerous. You must always be certain that you will not endanger yourself or others when attempting to put out a fire. For this reason, when a fire is discovered,

1. Assist any person in immediate danger to safety, if it can be accomplished without risk to yourself.
2. Call 911 or activate the building fire alarm. The fire alarm will notify the fire department as well as other building occupants and shut off the air handling system to prevent the spread of smoke.

If the fire is small (and Only after having done these two things), you may attempt to use an extinguisher to put it out.

However, before deciding to fight the fire, keep these things in mind:

- **Know what is burning.** If you don't know what is burning, you won't know what kind of extinguisher to use. Chances are you will know what is burning, or at least have a pretty good idea, but if you don't, let the fire department handle it.
- Even if you have an ABC fire extinguisher, there might be something in the fire that is going to explode or produce toxic fumes.
- Is the fire spreading rapidly beyond the point where it started? The time to use an extinguisher is at the beginning stages of the fire.
- If the fire is already spreading quickly, it is best to simply evacuate the building.

Do not fight the fire if:

- **You don't have adequate or appropriate equipment.**
If you don't have the correct type or large enough extinguisher, it is best not to try fighting the fire.
- **You might inhale toxic smoke.**
When synthetic materials such as the nylon in carpeting or foam padding in a sofa burn, they can produce hydrogen cyanide, acrolein, and ammonia in addition to carbon monoxide. These gases can be fatal in very small amounts.
- **Your instincts tell you not to.**
If you are uncomfortable with the situation for any reason, just let the fire department do their job.

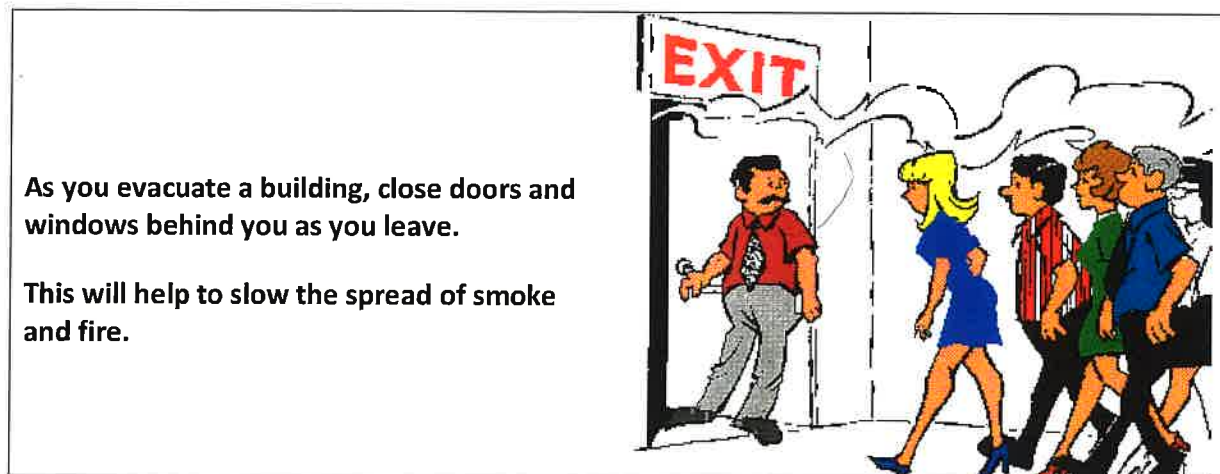


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The final rule is to always position yourself with an exit or means of escape at your back before you attempt to use an extinguisher to put out a fire.



In case the extinguisher malfunctions, or something unexpected happens, you need to be able to get out quickly. You don't want to become trapped.



- **Dry Chemical ABC fire extinguishers are the most common in the oil and gas industry. Savanna Well Servicing uses these fire extinguishers exclusively.**



Fire Extinguisher Inspection Criteria.

- **Fire Extinguishers must be visually inspected on a monthly basis**
 - Monthly inspection must be documented on the inspection tag
 - Inspection tag must be physically attached to the extinguisher
- **Confirm the pressure gauge indicator is in the operable range or position.**
 - A needle with the **green zone** is good
 - A needle in the **left red zone** means that the fire extinguisher is depressurized and warrants recharge
 - A needle in the **right red zone** signals a danger of over pressure
- **Verify the locking pin is intact and the tamper seal is in place and unbroken.**
 - A missing locking pin and tamper seal indicates the fire extinguisher may have been used
 - A damaged locking pin may prevent you from being able to easily pull it in the case of an emergency
- **Examine the extinguisher for obvious physical damage.**
 - Check if the cylinder and other external metal parts are free of corrossions, dents, cracks, and other signs of damage
 - Verify the hose and nozzle are undamaged and clear of obstruction
 - Make sure the operating instructions are legible and facing forward
- **Check the date on the last professional service date tag**
 - Yearly inspection required by certified fire extinguisher technician
 - ABC fire extinguishers must be recharged every 6 years

