

TITLE: 2709 FIRE EXTINGUISHERS: *Ready To Respond*

LENGTH: 13 MINUTES

PRODUCTION YEAR: 2007

PROGRAM SYNOPSIS:

Not everyone on the job knows how to use a fire extinguisher. When a fire breaks out, that's not the time to figure it out. Extinguishing a fire is a tricky thing; you must first know what's burning, how it burns, how you can control it and how to put it out safely. This program shows viewers how to calmly and effectively deal with fires and correctly use a fire extinguisher. Topics include classes of fire, various types of fire extinguishers and agents, specific techniques for extinguishing each class of fire, extinguisher locations in the workplace, inspecting extinguishers and how to safely respond to a fire.

SHOOTING LOCATION: A variety of workplaces, including office and industrial environments as well as outdoor job sites.

PROGRAM OBJECTIVES: After watching the program, the participant will be able to explain the following:

- The different classes of fire and the extinguishers used to put them out;
- Specific techniques for extinguishing each class of fire;
- The importance of knowing where extinguishers are located at your facility;
- What to look for when inspecting a fire extinguisher;
- What to do when a workplace fire has been spotted.

INSTRUCTIONAL CONTENT:

BACKGROUND

- Not everyone on the job knows how to use a fire extinguisher. When a fire breaks out, that's not the time to figure it out.
- Extinguishing a fire is a tricky thing; you must first know what's burning, how it burns, how you can control it and how to put it out safely.
- Remember, if a fire is spreading and you don't know what to do or don't think you can control it, get out. We want you safe.

HOW FIRES BURN & WHAT KEEPS THEM BURNING

- Fires need fuel, oxygen and enough heat to set it off.
- Take away one of these elements and the fire goes away.

CLASSES OF FIRE

- The class of fire is determined by the source of the fire or the type of fuel it's burning. This is important because each class of fire requires a specific type of extinguisher to put it out.
- Class A: Things of combustible solids; like wood, paper, rubber, and basically the kinds of material found in dumpsters, garbage cans and pallet stacks.
- Class B: These are flammable liquids like petroleum products: gasoline, oil, paint, solvents, kerosene, etc. These are particularly dangerous because these liquids can be ignited by a flame or a stray spark and they can spread fast.
- Class C: Electrical fires. Energized equipment like power tools, switches, appliances, power boxes are even more dangerous because you've got a live current to consider.
 - Class D: Metal fires. Some metals are combustible; like magnesium, titanium, even potassium and sodium not only burn at high temperatures, but can react violently with water and some other chemicals.
- Class K: Kitchen fires. These are fires that are fueled by cooking oils and cooking equipment like deep fryers.

USING THE EXTINGUISHER OR AGENT DESIGNED FOR THE TYPE OF FIRE

- In every situation, you have to know the right extinguisher or agent to use—one that is designed for that type of fire.
- There are a number of different kinds of fire extinguishers specifically designed to deal with the different classes of fires. Knowing the type of fire tells you the right type of extinguisher to use.
- It's not all that complicated because the class of fire that each fire extinguisher is designed for is shown right on the face plate; you use Type A extinguisher for a Class A fire, a Type B for a Class B, a Type C for a Class C fire, etc..
- Some extinguishers are labeled BC (like carbon dioxide), or ABC (like a multipurpose dry chemical extinguisher). That means it can put out all those classes of fires.
- The labels will also tell you what classes of fire you cannot use that type on. For example: Never use a type A extinguisher on an electrical, or a Class C fire. The water or foam applied to this type of extinguisher can conduct electricity, which means you can be electrocuted.
- You've got to know how to use them correctly and effectively. If not, your chances of controlling and putting out a fire are pretty slim.

USING FIRE EXTINGUISHERS CORRECTLY & EFFECTIVELY

- Most common types are simple to use. You've probably heard of the P.A.S.S. method; this stands for Pull, Aim, Squeeze, and Sweep.
- Stand back about eight feet from the fire; hold the unit upright; pull out the safety pin; free the hose and aim it at the base of the fire; then squeeze the discharge lever as you sweep a stream of extinguishing agent from side to side to completely cover the area till the fire is out.

Class A Fires

- With a fire fueled by paper, trash or rubbish (Class A fire), you should thoroughly cover the burning material with the extinguishing agent to put

out the fire. Whether you're using a multipurpose dry chemical or a water extinguisher, you then need to use a shovel or a rake to turn over the debris, checking for any remaining hot spots, and re-spray those areas.

Class B Fires

- Class B, or flammable liquid fires, can flare up when you first hit them with the extinguisher spray. Don't let it throw you; just start at the nearest edge and work it across the burning surface. Be careful that you do not spread the fire with the extinguisher stream.
- If you are using foam make sure it completely blankets the fire so it can form a layer on top of the flammable liquid. Stop your foam stream every so often and allow the foam layer to blanket the surface of the burning liquid; apply more foam as needed until the fire is out.

Class C Fires

- If you have to put out a Class C fire that is near computers or electrical equipment, you should use a carbon dioxide or a clean agent fire extinguisher. The CO₂ displaces the oxygen in the air; the fire goes out.
- Clean agent extinguishers use an environmentally friendly chemical that puts out the fire without the hazards of water or without the possibilities of damaging sensitive electronic equipment.
- A multipurpose dry chemical extinguisher will work on a Class C fire; these will leave behind a residue that can harm electrical equipment.

Class D Fires

- Class D fires involving combustible metals need a special kind of extinguisher. Look for the star on the label and check with your supervisor for any special fire fighting instructions for the type of metal that you're working with in your area.
- To fight a Class D fire you should start about three feet away from the fire; and, smother the burning metal with the extinguishing agent; pause for a moment; check for any hot spots; re-apply as needed. Be sure to wait for the metal to cool before you sweep up the debris.

EXTINGUISHING CLASS K FIRES

- Class K extinguishers, also known as wet chemical extinguishers, are found in commercial kitchens and are specifically designed for the types of fires that can start in cooking appliances (like deep fat fryers).
- These types of fires are hard to control because of the high temperature of the cooking oil and the insulated design of the equipment that keeps the heat in the fryer. The key is to smother the fire and cool down the oil.
- If you have a fire in a deep fryer, the first thing you need to do is to activate your fixed fire suppression system (if it isn't automatic) and back away from the flare area.
- If the fixed system doesn't work, then you can use the Type K extinguisher. When you discharge a Type K extinguisher, the liquid is dispensed as a fine mist and mixes with the cooking oil to create a soapy foam.
- The foam layer smothers the fire while the liquid reduces the temperature of the oil. You need to completely discharge the extinguisher to ensure that the fire doesn't reignite as the oil is cooling.

LOCATIONS OF FIRE EXTINGUISHERS IN THE WORKPLACE

- If there is a fire in your work area, you're going to need to find an extinguisher in a hurry. If you look around, you will usually see an extinguisher within 50 to 75 feet.
- In more hazardous locations, like storage areas that contain flammable liquids, refueling areas or areas where welding or cutting is being performed, this distance should be 30 feet. You will usually find an extinguisher at every exit.
- Your employer has probably selected and placed the right types of extinguishers in the right locations for the types of fires that you're most likely to have at your workplace.
- It's a good idea to take a look and make sure that they haven't been switched around or are missing. You don't want to have to figure this out when you see a fire.
- Anytime you start work in a new area take a minute to find out where the fire extinguishers are located. It's easy and it could mean a world of difference in a fire emergency.

FIRE EXTINGUISHER INSPECTION

- Fire extinguishers need to be inspected on a regular basis. Your company probably has a routine for this procedure
- Make sure the extinguisher is easily accessible and not blocked by anything. Check the seal; make sure it hasn't been broken or tampered with. Make sure the pin, nozzle, hose, and face plate are intact. If it has a gauge, make sure it reads fully charged.
- Check the tag and see if the service date is up-to-date; the service date should be within the past year. If the extinguisher has been used, or even if the seal is broken, you need to treat it as if it is empty; just take it to your supervisor to get it refilled.
- Let your supervisor know any time you have a problem with an extinguisher, or if you see one is missing, empty or damaged. Again, a little action on your part can make a big difference down the road—it can save a life.

RESPONDING TO A FIRE

- The first thing to do when you see a fire is to alert the folks around you, so they can shut down the equipment and get out of the building.
- Then you need to activate the building's fire alarm or have someone call 911 to get the fire department rolling in case the fire cannot be put out with a fire extinguisher.
- Next, you have to decide if you can put it out yourself. If it's too big or getting out of control, an extinguisher may not put it out. Don't be a dead hero; sometimes the best thing to do is to get out of the area.
- If you choose to fight the fire with an extinguisher, always make sure you have a safe escape route away from the fire.
- Start by alerting people in the area; just yell "fire" and make sure that you're heard; then pull the pin; aim at the base of the fire and squeeze the discharge lever; sweep the stream of extinguishing agent from side to side and cover the fire area until the fire is completely out.
- Remember, all fires big or small need to be reported and any extinguishers that were used should be considered empty and need to be refilled.