Fire Extinguisher Types and Uses

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Fire extinguishers can be an invaluable tool for both the public and the fire service. This short fact sheet is a review for both our own knowledge for combating small fires, and a way to ensure we have the knowledge to pass on to the public.

Fire Extinguisher Type	About and Use
ABC	The most common fire extinguisher found uses mono ammonium phosphate. The chemical is non-conductive and can be corrosive when mixed with water or moisture. Because they can be safely used on Class A, B, and C fires, they are placed in most public places over other types. Many of these extinguishers come in various sizes and may have a number located within the ABC designation. This number signifies the square foot area that the particular fire extinguisher can control. Training the public on their use cannot be understated.
A	For Firefighters, we call this extinguisher "the can." This extinguisher is plain water, or sometimes mixed with Class A foam, and uses air pressure inside of the extinguisher body to create a straight stream for use on Class A combustibles. Class A water extinguishers have been able to suppress a great deal of fire quickly when a hose line is not availble.
AC	AC extinguishers use de-ionized water, meaning all the minerals are removed. This type of extinguisher is acceptable for use on energized electrical equipment because of the water type and the low pressure, fine mist spray pattern from the non-conductive plastic wand. Extra training should be completed before using this type.
BC	The standard BC extinguisher is an excellent agent consisting of potassium bicarbonate for use on flammable fuels and electrical equipment. The dry chemical interacts with the chemical process of fire to break up the reaction. Typically, larger than other extinguishers, the body is not pressurized until the lever is depressed prior to use. A small cylinder on the side of the body filled with nitrogen pressurizes the powder for use. The reach of the spray is very acceptable.
BC	CO_2 BC fire extinguishers work by displacing the available oxygen around the fire and breaking up the chemical reaction. These extinguishers have a limited reach and may be difficult for some to operate. Flammable fuels and electrical equipment are both types of fires that these extinguishers are effective for use on.
BC	Another BC extinguisher uses an agent called Purple K. This agent has a base of potassium bicarbonate with other materials that make its more effective against liquid fuel fires. Often times this will be indicated with a sticker or other label on the extinguisher body. Since it works the same, while more effective as other BC extinguishers, it may not be identified from the exterior and only by its purple tint.
K	Class K fire extinguishers are for use in kitchens when dealing with cooking oils and fats. Although the properties of cooking oils are the same as other Class B fuels, because of the intent of the oils they are usually pre-heated and in an environment that will need to be cleaned up quickly. The Class K agent, which is a wet agent, interacts with the hot oil and makes foam. This is called saponification. Many Class K extinguishers are fixed systems inside of a restaurant or kitchen.