FIRE PROTECTION || Classes of Fire

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Fire requires three elements which are fuel, heat and oxygen, known as the fire triangle, and in the right combination the resulting chemical reaction can cause a fire. The key to extinguishing a fire is to remove at least one of the elements from the fire.

There are 5 major classifications of fire, known as A, B, C, D and K.

Class A fires involve ordinary combustible materials like cloth, wood, paper, rubber, many plastics and most kinds of trash.

Water is one of the most commonly used extinguishing agents for Class A fires. Air-Pressurized Water Extinguishers (APW) can be used on a Class A fire. Multi-purpose Dry Chemical Extinguishers, rated ABC, may also be used to put out a Class A fire.

Class B fires involve flammable and combustible liquids such as gasoline, alcohols, oil-based paints, petroleum greases, tars, oils, and solvents. Class B fires can also be started with flammable gases like propane and butane.

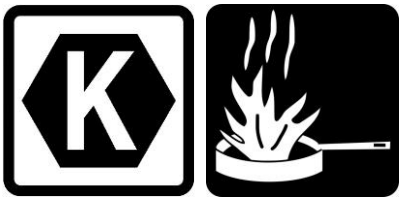
Do not attempt to extinguish a fire involving flammable gas unless the source of fuel can be located and turned off safely. Never use water to extinguish a flammable liquid or gas fire. Carbon Dioxide (CO_2) fire extinguishers or multi-purpose dry chemical fire extinguishers, rated BC or ABC, can be used to put out a Class B fire.

Class C fires involve energized electrical equipment such as computers, servers, motors, transformers, wiring, fuse boxes, and appliances.

Do not attempt to use water to extinguish an energized electrical fire. Carbon Dioxide (CO_2) fire extinguishers or multi-purpose dry chemical fire extinguishers, rated BC or ABC, can be used to put out a Class C fire.

Class D fires involve powders, flakes, dust, machine shavings or other fine pieces of combustible metals like lithium, magnesium, potassium, sodium, titanium, or zirconium.

The most common method for extinguishing a combustible metal fire is to cover the burning material with a dry powder extinguishing agent that works by smothering the fire, separating it from oxygen and absorbing the heat. Different metals may require different extinguishing agents.



Class K fires involve vegetable oils, animal fats and grease in cooking appliances.

Fire extinguishers with a K rating may be required in commercial kitchens where large quantities of food are prepared using oil or grease. Do not use a Class A fire extinguisher that contains water or a CO_2 fire extinguisher on a deep fat fryer because an explosive reaction may occur.

PHOTO ACKNOWLEDGMENTS

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