













There are many different types of materials that can burn, but not all of them can be put out with the same type fire extinguisher. This talk will discuss the five different classes of fire materials and the various types of portable fire extinguishers that should be used to put out fires involving those materials.

Extinguisher Type	Materials	Icons / Symbols
<b>Class A Ordinary Combustibles</b>	Fires involving paper, wood, rubber, cloth, and plastics.	 
<b>Class B Flammable Liquids</b>	Fires including grease, oil, gasoline, and oil-based paints	 
<b>Class C Energized Electrical</b>	Fires involving appliances, plugged in equipment, electrical fires	 
<b>Class D Combustible Metals</b>	Fires involving magnesium, titanium, potassium, sodium, etc.	 
<b>Class K Kitchen Fires</b>	Fires involving cooking fluids such as oils and fats.	 

Portable fire extinguishers will generally be labeled with the symbols for the types of fires they are designed to extinguish. For example, a type A extinguisher is suitable for use only on class A materials and should never be used on a flammable or combustible liquid fire (oil and water don't mix). However, a type ABC extinguisher is suitable for fires involving all three of those classes of fire hazards.

Class D fires require a special fire extinguisher designed just for combustible metals. Likewise, Class K fires require a specialized extinguisher as water could accelerate the fire.



At Penn State University, most of the extinguishers are Multi-Purpose Dry Chemical Extinguishers.

Dry chemical extinguishers put out fires by coating the fuel with a thin layer of fire-retardant powder, separating the fuel from the oxygen. The powder also works to interrupt the chemical reaction, which makes these extinguishers extremely effective.

Dry chemical extinguishers are usually rated for class B and C fires and may be marked multiple purpose for use in A, B, and C fires. They contain an extinguishing agent and use a compressed, non-flammable gas as a propellant.

ABC fire extinguishers are red in color, and range in size from five pounds to 20 pounds.

Dry Chemical extinguishers will have a label indicating they may be used on class A, B, and/or C fires.

