



Fire Extinguisher Training



**Joel A. Gallihugh, Chief
Department of Public Safety
University of Detroit Mercy**

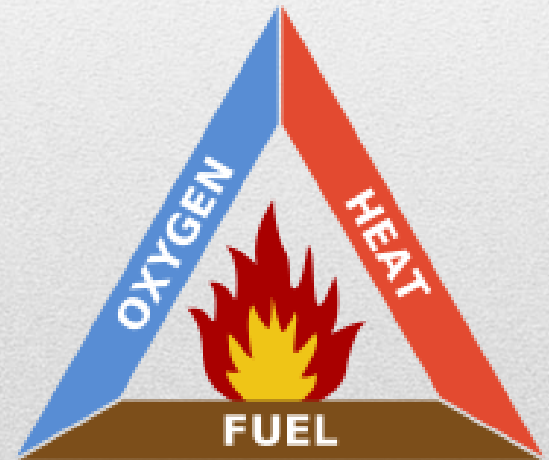


- **Definition of *fire***
 - *1a (1)* : the phenomenon of combustion manifested in light, flame, and heat (*Merriam- Webster*)
-

Fire is a chemical chain reaction that is made up of three components.

- ✓ Fuel
- ✓ Heat
- ✓ Oxygen

Fire Tetrahedron



Fire classifications



Class A - Ordinary combustibles Wood, paper, cloth, etc.



Class B - Flammable liquids and gasses Gasoline, propane, solvents, etc.



Class C - Electrical equipment Computers, Copiers, heaters, etc.



Class D - Combustible metals Magnesium, Lithium, titanium



Class K - Cooking media Cooking oils and fats

Fire extinguisher types

- There are different types and styles of fire extinguishers available around campus.
- Know the types, styles, and location of extinguishers that can be found in your immediate and surrounding area.
- The proper extinguishing agent will need to be used to eliminate one of the vital components of a fire.
- Detroit Mercy has 500+ fire extinguishers that are serviced annually by Eastman Fire Protection and Gallagher Fire Equipment Co.



Dry Chemical Fire extinguisher

- The dry chemical fire extinguisher is the most common fire extinguisher found on all of Detroit Mercy's campuses.
- The extinguisher works by interrupting the chemical chain reaction blocking the Fuel from Oxygen.
- It sprays a very fine powder in an attempt to coat the fuel and smother the fire.



Carbon Dioxide (CO₂) Fire extinguisher

- The CO₂ fire extinguishers can be used for fires involving electrical equipment and Class B liquid fires.
- The extinguisher works by displacing oxygen from the fire and replacing it with Carbon Dioxide.
- Due to displacement of Oxygen, **do not use in confined areas**. Also, it is not recommended for outdoor fires.
- The gas is extremely cold (-40 degrees). If the extinguisher does not have a fixed horn, a glove can be worn while holding the hose.



No fixed Horn



Fixed Horn

Clean Agent Fire extinguisher

- The Clean Agent fire extinguisher is not commonly used at any of Detroit Mercy's campuses.
- Detroit Mercy's clean agent extinguishers is rated for Class B and C fires.
- The clean agent is a liquid that inhibits the chemical reaction.
- It will not damage sensitive and irreplaceable materials, equipment and facilities. It leaves no residue and requires no cleanup after discharge.



K Guard Fire extinguisher

- The K Guard fire extinguisher is found in Kitchens at all of Detroit Mercy's campuses.
- K Guard fire extinguishers are rated for Class K fires.
- It contains a pressurized liquid agent that inhibits the chemical reaction.
- Please be aware that using this type of fire extinguisher on an oil or grease fire may cause the grease or oil to splatter.
- Keep enough distance between you and the fire.



Appropriate time to use a fire extinguishers

- Alarm has been sounded.
(Check your area for the nearest pull station before an emergency occurs)
- Building evacuation has begun.
- Fire is small and confined.



Appropriate use of fire extinguishers

- You are properly trained in the use of the extinguisher.
- You are confident you can put the fire out.
- You have a clear escape route behind you.



Inappropriate use of fire extinguishers

- The fire is large and has grown beyond its original confined space.
- Your escape route is threatened.
- You are not sure if you have the correct type of fire extinguisher



Personal hazards

- Your safety is paramount.
- Smoke and noxious fumes can cause unconsciousness.
- Burns ranging from minor to 3rd Degree Burns.
- Death may result from smoke inhalation or burns.
- Don't be another victim.



P. A. S. S.

Method for using fire extinguishers

Hold the extinguisher upright

- **PULL** the pin
- **AIM** at the base of the fire
- **SQUEEZE** the handle
- **SWEEP** the base of the fire

➤ Do not aim high at the flames

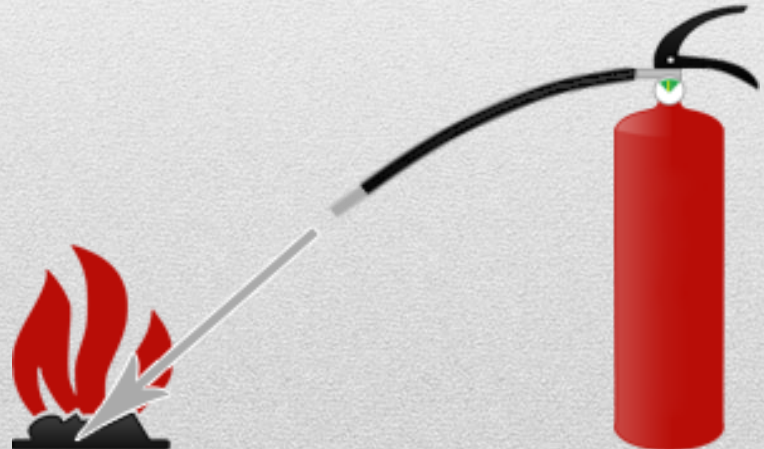
PULL

Keep distance between you and the fire. Ensure you have a safe escape route behind you. With a firm grip on the handle and the pin, **PULL the pin, breaking the seal and the pin completely clear of the hole.**



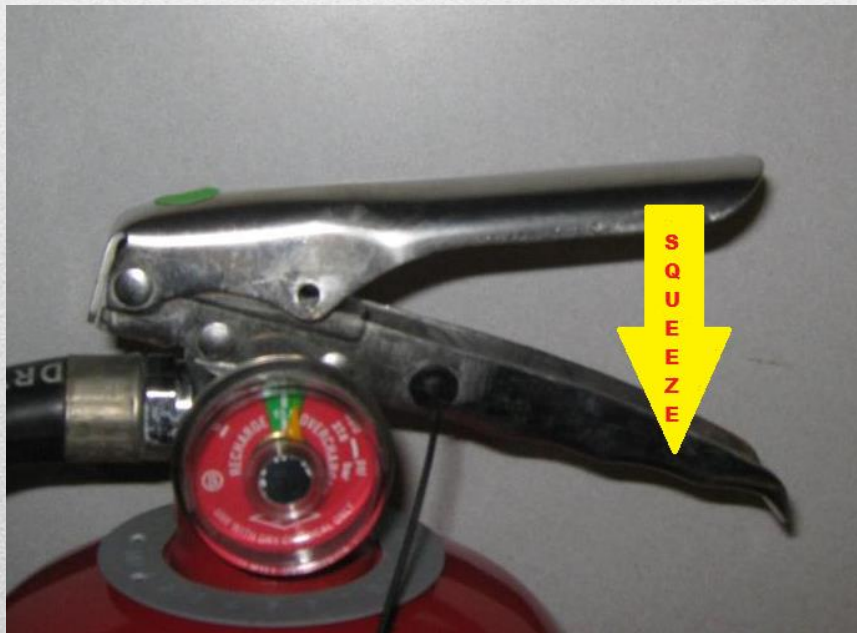
AIM

Keep distance between you and the fire. Ensure you have a safe escape route behind you. With a firm grip on the handle and the nozzle, aim the nozzle at the base of the fire closest to you.



SQUEEZE

Keep distance between you and the fire. Ensure you have a safe escape route behind you. With a firm grip on the handle and the nozzle, aim the nozzle at the base of the fire nearest to you and squeeze the handles together.



SWEEP

Keep distance between you and the fire. Ensure you have a safe escape route behind you. With a firm grip on the handle and the nozzle, aim the nozzle at the base of the fire nearest to you and squeeze the handles together. **SWEEP side to side at the base of the fire.**



Let's Review

- First priority is your safety.
- Secondly, ensure that the building fire alarm is activated to warn other occupants.
- If the fire is small and contained, you know the type of fuel, and have the appropriate fire extinguisher, you can attempt to extinguish the fire with your back toward a safe escape route.



Prevention methods

- Keep work areas clean and clutter-free



- Know about the chemicals you work with

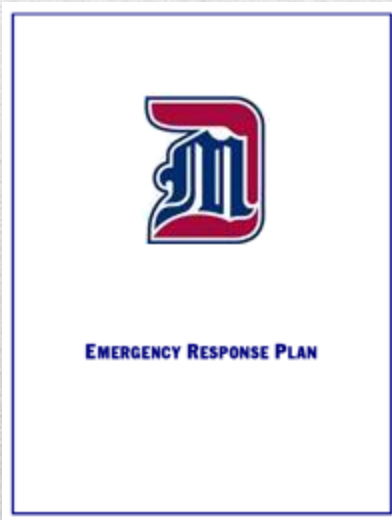


- Know how to handle and store chemicals



Prevention methods

- Know what you are expected to do in an emergency



- Become familiar with the University of Detroit Mercy Emergency Response Plan
-



Detroit Mercy's Department of Public Safety would like to thank you for taking the time to review the previous training materials. If you have any suggestions or comments, please send an email to publicsafety@udmercy.edu.

Contact Us:

Campus Emergency 313-993-1123

Off Campus Emergency 9-1-1

General Information 313-993-1235
