



Fire Safety and Prevention in Cleanroom Environments

Most fires start out small, but after a few minutes they can be out of control. Fires are usually ignited by electrical malfunctions or chemical reactions. It's important that all electrical equipment and connections are regularly inspected to reveal any faulty or potentially hazardous conditions. You should also study all of the Material Safety Data Sheets (MSDS) for all of the chemicals used in the lab. Follow all of your company's policies and procedures when mixing chemicals. Make sure you know which chemicals are reactive and flammable and use the necessary Personal Protective Equipment (PPE) and take the necessary precautions when working with these chemicals. Preventing fires is the first step in fire safety!

Different fires need different treatment

Class A fires are the most common. They involve wood, cloth, paper, rubber and plastics. Water or dry chemicals should be used to extinguish these fires.

Class B fires involve flammable liquids, gases, and greases. Foam, carbon dioxide, and dry chemical extinguishers should be used.

Class C fires involve fires involve electrical equipment. Never use water to extinguish these types of fires.

Class D fires involve combustible metals, such as magnesium, titanium, zirconium, and sodium.

Know what to do in an emergency

If a fire does start, you need to know what to do, and do it quickly! Remember – stay calm – and follow these rules:

- Get yourself to safety
- Warn others of the fire
- Sound the alarm
- Exit the lab by any of the exit doors
- Close the doors behind you as you exit to contain the fire
- Do not stop to remove cleanroom apparel
- Do not block doorways
- Meet at the assembly point
- Contact your supervisor and inform him/her of your condition

Evacuation Plan

It's important that you're familiar with the evacuation plan so you can quickly vacate the area if you need to. Please refer to your company's evacuation plan for specific routes of evacuation and assembly points. Evacuation plans are typically posted on walls throughout the building.

If you need to use a fire extinguisher, follow these steps:

1. Remember to choose the right extinguisher for the fire (Class A, B, C, D, etc.)
2. Pull the pin
3. Aim the hose at the base of the fire
4. Squeeze the trigger
5. Sweep the hose side to side

If you follow this simple guidelines you may be able to put out a small fire or at least keep a small fire under control. Remember that putting out fires is not your responsibility and the use of a fire extinguisher must only be used if you feel comfortable and are trained. Please follow your company's specific guidelines for fire safety and prevention.