



INTRODUCTION

Fire is something we encounter every day of our lives whether we are cooking a meal for ourselves or lighting a fireplace for warmth. Although we may use fire to make our lives easier there are occasions when we are presented with fire in a less controlled setting, such as an outlet sparking leading to an electrical fire. In order to know how to respond and avoid injury due to fire it is important to know the cause and steps necessary to safely evade a fire.

Fire Prevention Steps

As important as it is to recognize the different types of fires, it is also important to know the steps that must be taken to avoid fires from taking place. Some general guidelines are shown below.

- Do not overload circuits or use damaged cords
- Do not place hot equipment near combustibles (e.g. space heaters near paper)
- Some products in an office are basically chemicals. Properly store all chemicals and be aware of their chemical flash points, flammability, and reactivity which can be found on the Material Safety Data Sheet (MSDS) or in the instructions for use and handling. Solvents and sprays for cleaning are examples of these products.
- Keep gas and solvents away from sources of ignition and be sure to clean spills immediately
- Obey no smoking signs and only smoke in designated areas
- Dispose of used cigarettes and spent matches properly
- Keep work areas free of dust and lint and dispose of trash properly
- Whenever possible, use non-flammable chemicals for cleaning



Once a fire has been detected, the following guidelines can help employees avoid injury.

- Keep extinguishers, fire hoses and fire exits clear and ready for immediate use
- Participate and take fire drills seriously
- Be acquainted with the evacuation routes and muster point for your work area.
- Be familiar with the personnel in your work area who are trained in fire safety and first aid
- Never use elevators to evacuate during a fire; always use the stairs
- If a fire is spotted or you detect smoke:
 - Call the fire department
 - Activate the fire alarm



FIRE SAFETY

- Alert the fire safety warden
- Report any changes in conditions to the fire safety warden and the fire department
- Workers responding to a fire should be properly trained; untrained workers should evacuate following procedures and designated evacuation plan.

When there are visitors in the building, the evacuation plan should be discussed with them in advance and they should be informed of any planned fire drills.

Actual Near Miss – Office

Smoke was detected in the kitchen and there was an odor similar to an electrical fire. The fire was reported to the fire warden and the smoke was investigated. No employees were injured due to this incident.

Fire Types & Extinguishing Methods

Employees are not allowed to use fire extinguishers or other firefighting equipment; unless their only escape path is blocked or they have fire fighting training. In the event that escape from the area is not possible without using firefighting measures, it is important to know the different types of fires that may occur and the methods that can be used to extinguish the particular fire type or source. Fire occurs when three things happen when there is a presence of oxygen, an ignition source and a combustible material, known as a fuel. The fuel type determines the type of fire you must contend with and the method that should be used to extinguish the fire. Listed below are the different types of fire and how to extinguish them.

- Class A involves solid combustible materials such as paper, cloth, trash, wood and other ordinary combustibles. Fire extinguishing media and fire extinguishers applicable to Class A fires are mainly water or products containing water
- Class B involves liquid materials such as grease, oil, paint and solvents. Fire extinguishing media and fire extinguishers applicable to Class B fires are foam and inert gases like CO₂
- Class C involves electrical equipment. Fire extinguishing media and fire extinguishers applicable to Class C fires are non-conductive materials such as dry powder. Class A extinguishers are NEVER to be used on electrical fires due to their water content
- Class D fire extinguishers should be used on fires resulting from combustible metal fires such as magnesium and lithium

Multi-purpose fire extinguishers are extinguishers that can be used to extinguish multiple classes of fire. These types of extinguishers can be used to extinguish any class of fire covered by the extinguisher. For example, a BC fire extinguisher would extinguish Class B and Class C fires.

PASS Method

When using extinguishers, the user should use care not to spread embers around, thereby spreading the fire. The proper method to use a fire extinguisher is the PASS method. The PASS method is an acronym which stands for pull, aim, squeeze, and sweep shown below.

- Pull the pin from the top of the extinguisher
- Aim at the base of the fire
- Squeeze the lever slowly
- Sweep from side to side

Actual Near Miss – Field

While performing a job aboard a vessel, a shipyard worker asked for permission to enter the smoking room to have a cigarette. After entering the room, he lit his cigarette with safety matches. Instead of putting the match in the safety ashcan he put the spent match back in the match box. This resulted in all the other matches in the box igniting. The match box was extinguished and no personnel were injured.

Discussion

- Report and discuss any incidents pertaining to fire hazards or fire safety with your supervisor.