

Fire Safety



Overview

We will look at

- Legal requirements
- Understanding fire
- Fire hazards and risks
- Fire prevention and control
- Fire extinguisher safety
- Fire procedures



Legal Requirements

Regulatory Reform (Fire Safety) Order 2005 requires that;

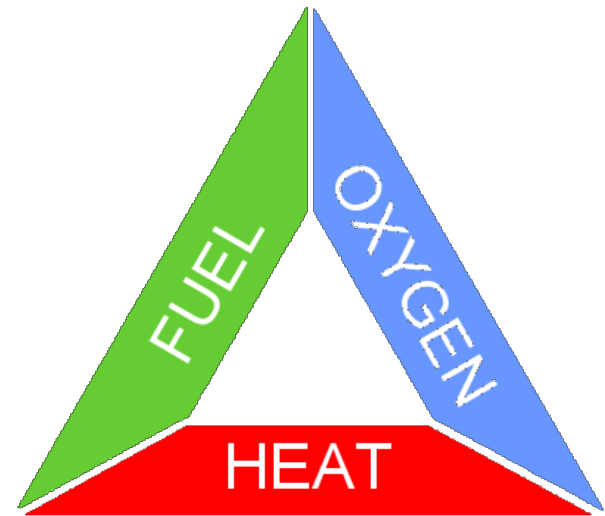
- Fire risks are identified and controlled
- A Fire Risk Assessment is completed and reviewed regularly or if work areas change
- Findings are implemented, so far as is reasonably practicable

Understanding Fire

Fire needs 3 things to exist

- Fuel
- Oxygen
- Heat

“The Fire Triangle”



Understanding Fire

Fuel

- Chemicals - acetone, ether, methanol, etc
- Gases - hydrogen, natural gas
- Plastics - PCs, cable insulation, research equipment
- Paper and cardboard - packaging
- Wood - desks, benches
- Fabrics - chairs, blinds, clothing
- You...

Understanding Fire

Oxygen

- A natural component of air @ 21%
- Enriched atmospheres, > 21% oxygen
 - labs, oxygen storage
- Situations where oxygen / air is more difficult to control:
 - Outdoors
 - Automatic ventilation systems
 - Open doors or windows



Understanding Fire

Heat (Ignition Source)

- Heating appliances
- Research and computer equipment
- Other electrical equipment
- Smoking materials
- Contractor's equipment
- Arson



Understanding Fire


Hazards and risks of fire

- Smoke & fumes
 - Breathing difficulties, asphyxiation, poisoning
- Heat & flames - *up to 1250°C*
 - Burns
- Building debris
 - Impact injuries, burns
- Injury while escaping fire
 - Trips, falls, trampling



Fire Prevention

- Be fire safety aware
- Control ignition sources
- Prevent any accumulation of fuels
- Only use electrical equipment that is PAT tested
- Abide by no smoking policy

| H H Mills Physics Laboratory | | |
|--|--------------------------|--------------------------|
|  | | |
| Asset ID: Y1296 | Last Test: 30/07/2008 | |
| Status: PASS | Tested By: TOM | Next Test: 30/07/2010 |

Fire Prevention

- Do not block fire exits, call points or extinguishers
- Do not wedge fire doors open
- Ensure good housekeeping
- Maintain effective security
- Report any bad practice or risks immediately to your line manager



Fire Procedure - Finding a Fire



If you discover a fire

- Shout 'FIRE'.
- Raise the alarm by breaking the glass on a RED fire alarm call point.
- Call Security on 112233. Security officers / the Security control will call 999 on your behalf but you can always call the Brigade directly if you know there is a fire.
- Do not return to your desk/work area to collect personal belongings
- Leave the building by the nearest available fire escape route.
- Go to the assembly area and await instruction.

Fire Extinguisher Types

Water Paper, wood, etc.
Not electrical, liquids or gases



Foam Solids & liquids
Not electrical or gases



Powder Solids, liquids, gases &
electrical



CO₂ Electrical, safe on most small fires



Fire Procedure - Evacuation



On hearing the alarm

- Leave the building by the nearest available fire escape route.
- DO NOT delay your escape but if you can turn off equipment/close doors and windows as you leave then do so.
- Go to the assembly area and await instruction

Fire Procedure - Evacuation

- Do not delay to collect belongings
- Do not use the lifts
- If smoke is present then keep low to the floor to aid your escape
- If necessary check that internal doors are cool with the back of your hand before opening them

Examples of defects to report

- Covered smoke detectors
- Fire doors damaged or not closing properly
- Broken/damaged lighting, especially emergency lighting
- Missing or damaged fire extinguishers
- Service riser covers open.
- Accumulation of rubbish and clutter excessive paper in offices etc.
- Obstructed corridors.