



# Control of Fire and Explosion Hazards Arising from the Use of Chemicals in Workplace

26th July 2017 (Wednesday)

Pearl International Hotel, Kuala Lumpur





# Control of Fire



- Early Detection



Smoke Detector

- Gas Detector



- Fire Alarm Panel



- Breakglass





Direct to Bomba

CMS  
System



Alarm Bell



135 F / 57°C

Heat Detector



Fire Control Panel



Direct to Bomba

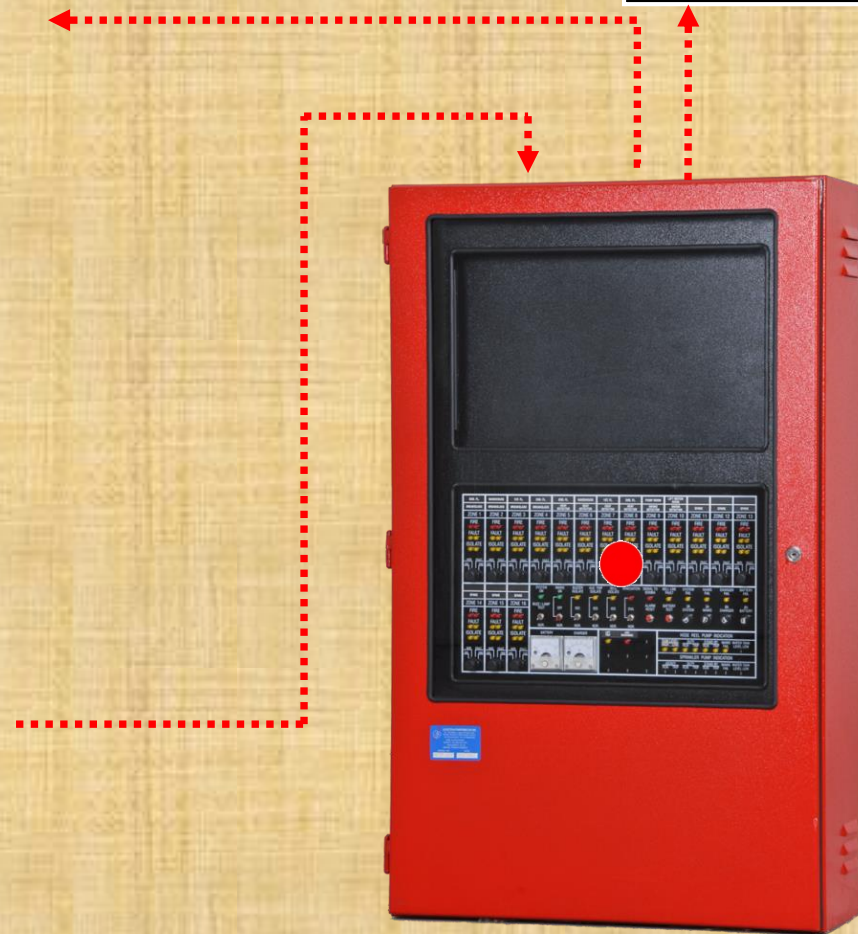
CMS  
System



Alarm Bell



Smoke Detector



Fire Control Panel





Direct to Bomba

CMS  
System



Alarm Bell



Breakglass



Fire Control Panel



# If Explosion

## Dry Powder



## Liquid Chemical Foam Fire extinguisher





Material Safety Data Sheets (MSDS) and chemical labels provide important fire prevention information. Always review the MSDS before working with a chemical. It will tell you how easily the substance can catch fire. Before you move, handle, or open a chemical container, read its label. Chemical labels often indicate a fire hazard by the colour red combined with a number. The number tells you the degree of the hazard:

- 4 Severe hazard
- 3 Serious hazard
- 2 Moderate hazard
- 1 Slight hazard
- 0 Minimum hazard





If a chemical is red labelled with a Flammable sticker, remember, it must be stored in a flammable chemical cabinet when not in use. Check your area today before you start work. Ensure all the flammable chemicals are in a cabinet. Also, make sure the cabinet is closed . . . an open cabinet doesn't do anyone any good. Help prevent chemical fires . . . it's up to us all.



# Safe Chemical Use & Storage

Always read the label and the Material Safety Data Sheet to assess flammability and other fire hazards of a substance. When using and storing chemical materials, always do so in an area with adequate ventilation.





# Maximum Building Security

To help prevent arson fires, always lock up as instructed, report suspicious persons or behaviour and never leave combustible garbage outside near your building..



At least 140 people were today charred to death and over 100 others injured after an oil tanker overturned and burst into flames as crowds rushed to collect petrol that spilled out to a highway in the Bahawalpur district of Pakistan's Punjab Province.

News on India Oil Tanker Caught Fire





# Thousands evacuated as Zhangzhou, China chemical fire reignites

- Thousands have been evacuated in the southern Chinese province of Fujian as a massive chemical oil fire reignited.
- At least 800 firefighters and 170 fire engines are at a chemical plant in the city of Zhangzhou.
- Firemen are battling the third in a series of blazes that began on Monday, when an oil leak caught fire and spread to nearby tanks.
- More than 14,000 residents in the surrounding area have been evacuated, reported state news agency Xinhua.
- The plant produces the chemical paraxylene which is used for fibre and plastics.







REUTERS









FIRE FIGHTER

# GET OUT ALIVE!

In a fire, every second delayed may be fatal. Make sure everyone in the house is well prepared to act quickly and knows exactly what needs doing.

## In case of fire

- 1 If room is filled with smoke, crawl out with nose not more than 2.5cm (one inch) above floor to the exit.
- 2 Call 999 or the nearest fire station.
- 3 Save your family and yourself first by using the emergency exit. Close door after coming out to limit outside oxygen from entering.
- 4 If clothing catches fire, roll on the floor to put out the flames.
- 5 Don't stop to collect valuables.
- 6 Don't go back inside.
- 7 Stay calm and shout "FIRE! FIRE!" to alert everyone.
- 8 Do a headcount of family members once outside the house.
- 9 Stay calm and let the rescue team do its job.



Source: Fire Prevention Council Malaysia and Fire and Rescue Department

## How to make your home fireproof

### Plan family escape route

- > Everyone must know the escape route.
- > Doors, windows and grilles must open easily from inside.
- > Know where keys are kept. Maintain key storage location.



### Minimise risks

#### De-clutter home

- > Discard highly combustible things such as paper, magazines and old clothes.



#### Kitchen

- > If a fire break out, DON'T pour water as fire will grow. Use fire blanket or wok cover.
- > Switch off gas when not in use.



#### Keep fire sources away

- > Keep lighters and matches out of children's reach.
- > Do not leave lit candles/joss sticks unattended.



#### Electrical appliances

- > Don't have more than one electrical appliance using the same socket.
- > Keep heat-emitting electrical appliances at least 1m away from flammable materials.
- > Switch off power sockets when not in use.
- > Make sure electrical appliances are SIRIM-approved.



#### Tech gadgets

- > Don't leave mobile phones, power banks, laptops and other gadgets charging overnight.
- > If they need charging, don't place them on combustible surfaces such as wood or your bed. Put on cement floor, tiles or marble.



#### Fire extinguisher

- > Hang on the wall at shoulder level - keep at least one in the kitchen and one in the corridor.
- > Look for ABC dry powder or multipurpose extinguisher which can be used on carbon-based material, oil and electrical equipment.



## Fire fighter home protector kit



#### Fire extinguisher

- > To be placed in kitchen and bedroom.
- > Have at least one on each floor.
- > Use to put out small fires and to create a path to escape a fire.



#### Smoke detector

- > Install in kitchen, living room, stairwell and bedroom.
- > Detects smoke equivalent to that exhaled by 3 smokers.
- > Gives around three minutes' escape time.



#### Emergency key box

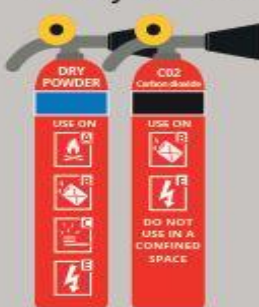
- > Put beside doors, windows with grilles or emergency exits.
- > It comes with a transparent glass with the words break glass for key.
- > Ensures that the key is always there, saving time to look for keys during a fire.



#### Fire blanket

- > Place one in the kitchen and in living room.
- > Use to put out wok or grease fire and to escape from a fire.
- > Perfect size to get is 4ft x 4ft (122cm x 122cm).

## Know your fire extinguishers



Combustible Materials  
Wood, paper, textiles, etc.



Flammable Liquids



Flammable Gases



Electrical Equipment



Cooking Oils

## How to use a fire extinguisher



Pull the pin.



Aim the nozzle at the base of the fire. Hitting the tops of the flame with the extinguisher won't be effective.



In a controlled manner, squeeze the trigger to release the agent.



Sweep the nozzle from side to side until the fire is put out.

## Residential and non-residential fires



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FIRE FIGHTER



ISO 9001:2008  
ISO 14001:2004

The Quality Management System is applicable to Manufacture & servicing of portable fire extinguishers (dry powder & CO2) Servicing, installation & maintenance of fire protection system.

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