Safety Topic for the Month of May

"FIRE AND FIRE EXTINGUISHERS"

What is Fire?

Fire is the result of rapid combustion of materials with oxygen. In order for fire to occur, three (3) elements must be present – (Oxygen + Fuel + Heat = Fire).

Classes of Fire

• Class A Fires – Combustibles; Wood, Paper, Plastic, Rubber, Cloth

• Class B Fires – Flammable Liquids; Petrol, Diesel, Kerosene, Oil, Grease, Paint, Thinner

• Class C Fires – Flammable Gasses; LPG, Methane, Acetylene, Propane, Butane

• Class D Fires – Flammable Metals; Magnesium, Sodium, Aluminum

• Class E Fires – Fires involving Electricity; Electricity does not burn but will provide the ignition source. Electricity is dangerous!

WATER must NOT be used to fight fire involving electricity.

Methods of Extinguishment

• Starvation (limit fuel) – in this scenario, the fuel is not literally removed from the fire, it is separated or starved from the oxidizing agent

• Smothering (limit oxygen) – here oxygen is not literally separated from the fire, but it is separated from the fuel

• Cooling (lower heat) – remove the heat from the fire by cooling the fuel to below its ignition point. Water is most commonly used method for

Types of Fire Extinguishers

Fire extinguishers are classified by the types of fire they are suitable to fight.

1. Water
• Class A fires ONLY.
• Red in color
• Has pressure Gauge to allow visual capacity check
• 30-40ft maximum effective range
• Can be started and stopped where necessary
• Extinguishers by cooling burning material below ignition point

2. Carbon Dioxide
• Is mainly used for type E Fires
• Red/Black in color
• Has no pressure gauge – Capacity verified by weight
• 3-8ft maximum effective range
• Can be dangerous to health is an enclosed area

3. Dry Chemical Powder
• Class A, B or E Fires
• Red/White in color
• Has pressure gauge to allow visual capacity check
• 5-20ft maximum effective range
• Extinguishers by smothering burning materials
• DCP is the most common extinguisher on site

4. Foam
• Most often used in dealing with Class B Fires – Flammable Liquids
• Can be used to fight Class A Fires

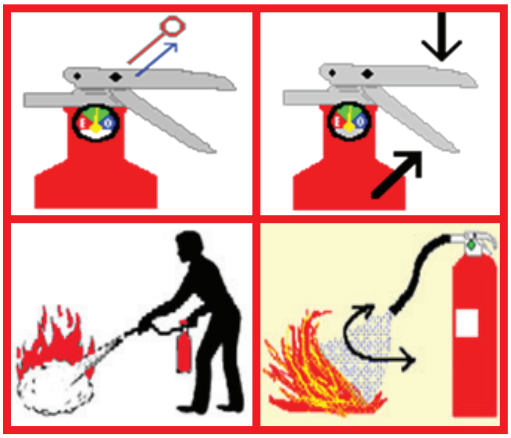
How to Use a Fire Extinguisher
To operate a fire extinguisher, remember the word PASS:

• **P** – Pull the pin. Hold the extinguisher with the nozzle pointing away from you

• **A** – Aim low. Point the extinguisher at the base of the fire

• **S** – Squeeze the lever slowly and evenly

• **S** – Sweep the nozzle from side to side at the base of the fire



In the Event of a Fire
You should attempt to fight a fire only:
• When you are trained in basic fire fighting
• When the fire is small and you have an exit route
• When you have correct extinguisher and appropriate PPE
• When the wind direction is favorable
• When you feel confident in your ability to fight the fire

The final rule is to always position yourself with an exit or means of escape at your back before you attempt to use an extinguisher to put out a fire. If you are not confident, leave the fire fighting works to the professionals.

Report all OH&S Hazards including accidents and near misses to OHS on ohs@nac.com.pg

AUTHORIZED BY: MANAGEMENT
ISSUED BY: OCCUPATIONAL HEALTH AND SAFETY
DATE: 01ST MAY, 2022

National Airports Corporation
PAPUA NEW GUINEA