

Fire Safety

Toolbox Talk



Fire

Fire is a chemical reaction called **combustion**.

COMBUSTION → fast oxidation that consumes oxygen and produces heat



Conditions for the development of a fire

☐ HEAT

- High amounts
- Concentrated amount

☐ FUEL

- Gas
- Fine dispersion (droplets, dust etc.)
- Properties (flammability)

☐ OXYGEN

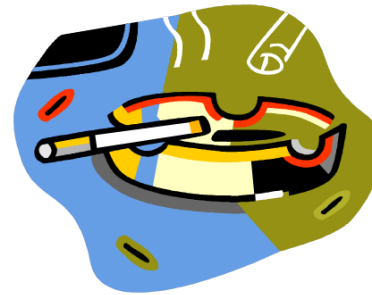
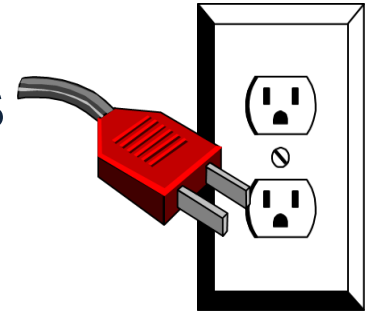
- Suitable percentage ($>14\%$)



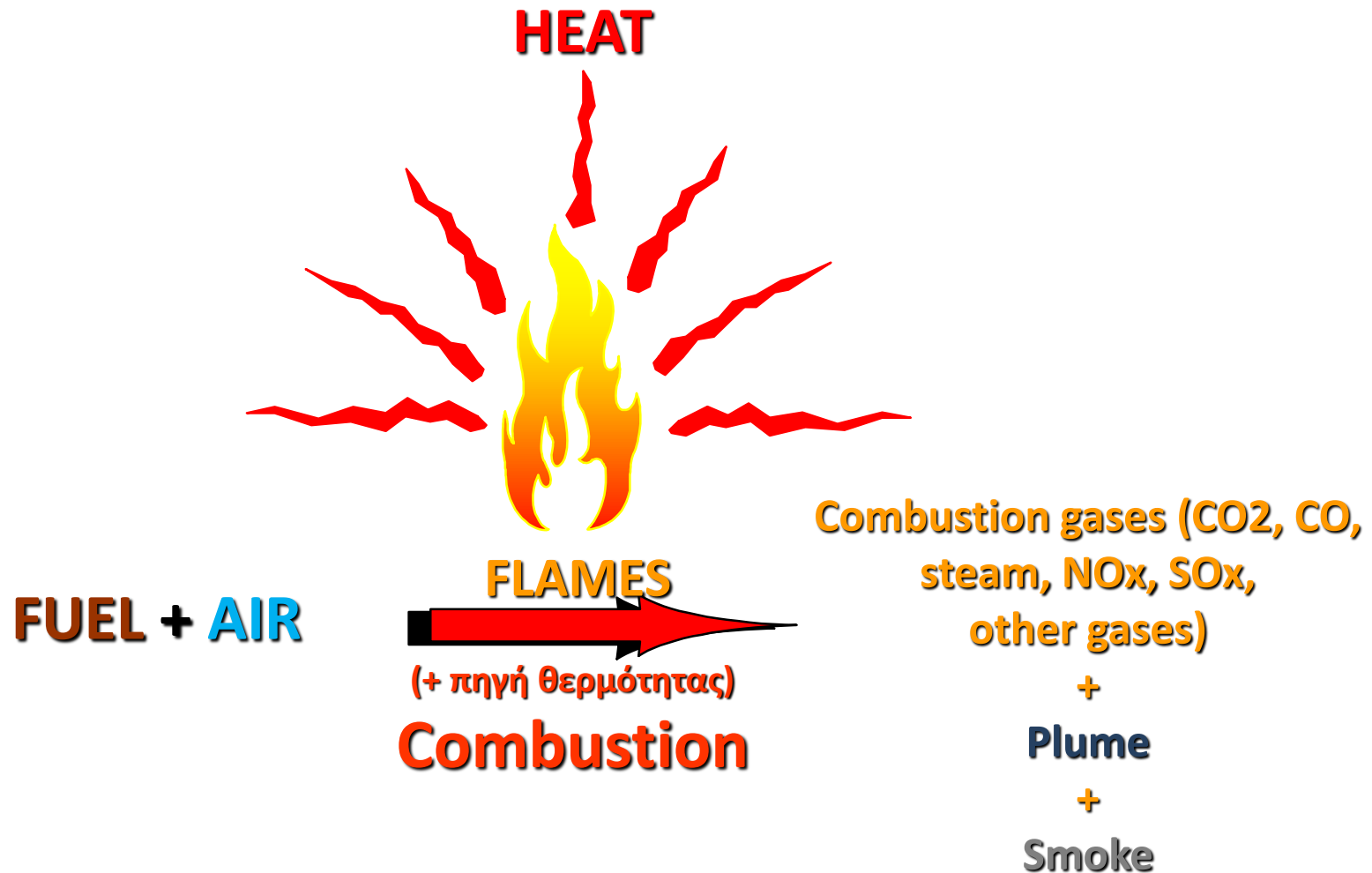
The Fire Triangle

CAUSES OF FIRES

- Electrical installations/ electrical appliances
- Careless smoking
- Hot work
- Improper cleaning
- Flammable materials management



Combustion Products



FIRE SUPPRESSION

First Steps

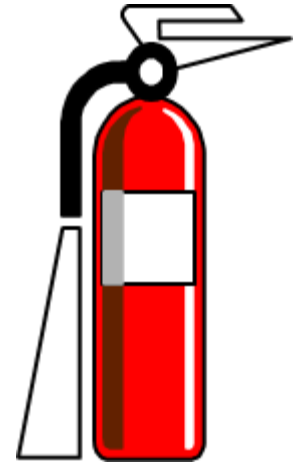
IN CASE YOU DETECT A FIRE

- Stay calm
- Fight the fire with portable means if it is limited and can be put out immediately
- If not, move to a safe location
- Sound the alarm
- Call 112 or the reception to inform it on the details

• USING AN EXTINGUISHER

(ONLY if safe to do so)

- Stay between the fire and the fire exit
- Select the appropriate fire extinguisher
- Pull the pin
- Aim at the base of the fire
- Release the entire charge by sweeping from your position outwards or from bottom upwards,
- Be sure for the result to avoid fire revival
- Never turn your back to the fire even if it seems you extinguished it



FIRE SUPPRESSION

First Steps

- Walk toward the emergency exits if the fire is out of control
- Shut down all equipment if it is safe to do
- Close the door behind you
- Do not attempt heroic actions
- Discourage any curious bystanders

FIRE SUPPRESSION

Non-intervention

Do not attempt to extinguish a fire

- When there is risk of explosion
- When you are not sure if you can put the fire under control (big quantities of burning material, unknown burning material, lack of training)
- When there is intense fume
- When there is limited visibility
- When there are adverse weather conditions
- When there is panic among the evacuees

FIRE SUPPRESSION

Person in flames

❖ PERSON IN FLAMES

- Stop the person in panic
- Throw the person down
- Roll/ Wrap the person with a non-combustible cloth, blanket or other equivalent material
- Seek medical advice

❖ FIRST AID FOR BURNS

- Do not use self-made compresses or spreads with self-made ointments
- Rinse with plenty of clean, cool water
- Cover loosely with a clean cloth
- Seek medical advice



AREA SIGNS

ESCAPE ROUTES

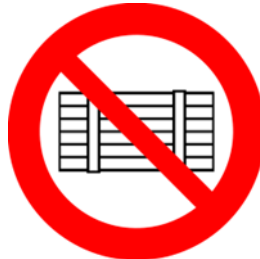


EXITS



AREA SIGNS

FIRE EQUIPMENT



ELECTRIC PANELS



BIBLIOGRAPHY

- *Healthy Working Lives NHS Health Scotland fire*
- *A Guide to Fire Safety Engineering Dr S D Christian*
- *FUNDAMENTALS OF FIRE PROTECTION FOR THE SAFETY PROFESSIONAL SECOND EDITION , LON H.PERGUSON CHRISTOPHER A.JANIAC*

ANY QUESTIONS?

**THANKS FOR YOUR
PARTICIPATION!!!**