



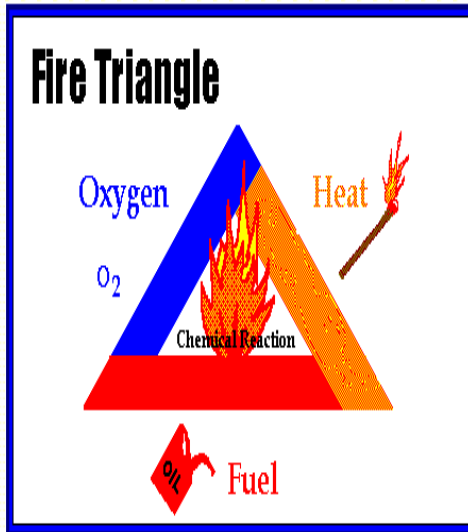
EXTINGUISHER TRAINING

29 CFR 1910.157

Objectives

- Understand basic firefighting concepts:
 - *R.A.C.E.*
 - *P.A.S.S.*
- Know what to do if you find a fire
- Be able to correctly and safely select and use a fire extinguisher

How Does a Fire Work?



- *Three components*
- *Need all three components to start a fire*
- *Fire extinguishers remove one or more of the components*

Class A Ordinary Combustibles

- *Trash*
- *Wood*
- *Cloth*
- *Paper*
- *Rubber*
- *Plastics*



Class B Flammable Liquids

- *Gasoline*
- *Oil*
- *Grease*
- *Tar*
- *Oil-based paint*
- *Lacquer*
- *Flammable gases*



Class C Electrical

- *Energized electrical equipment*



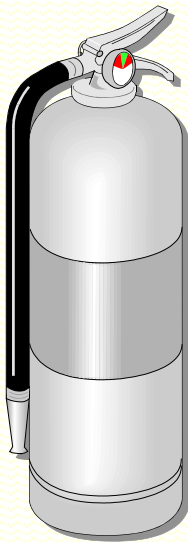
Class D Combustible Metals

- *Magnesium*
- *Sodium*
- *Potassium*
- *Titanium*
- *Zirconium*
- *Other flammable metals*



Fire Extinguisher Types

PRESSURIZED WATER



A Trash Wood Paper



B Liquids Grease



C Electrical Equipment



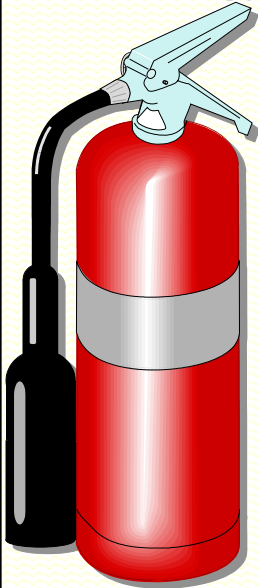
- Class "A" fires only.

- 2.5 gal. water - approximately 1 minute discharge time

- Range 30 - 40 feet

Fire Extinguisher Types (cont.)

CARBON DIOXIDE (CO₂)



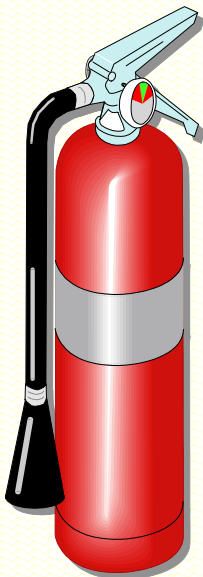
- Class "B" or "C" fires

- 2.5-100 lb. 8 - 30 seconds discharge time

- Range 3-8 ft.

Fire Extinguisher Types (cont.)

MULTIPURPOSE DRY CHEMICAL



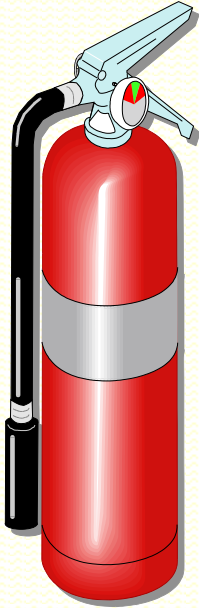
- Class "A", "B", or "C" fires

- 2.5-20 lb. dry chemical 8-25 seconds discharge time

- Range 5-20 ft.

Fire Extinguisher Types (cont.)

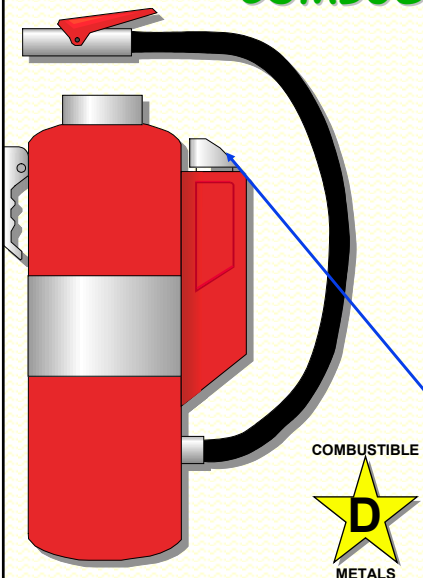
HALON



- Class "A", "B", or "C" fires
- 9-17 lb. Halon 1211 8-18 seconds discharge time
- Range 9-16 ft.
- Fumes toxic if inhaled
- Halon is no longer manufactured

Fire Extinguisher Types (cont.)

COMBUSTIBLE METAL

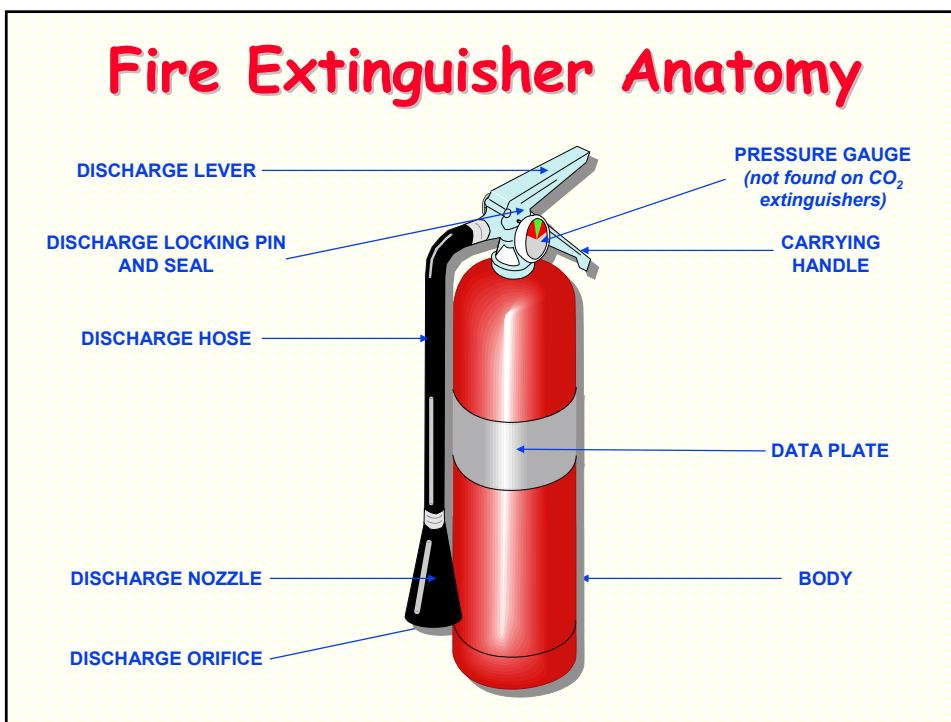


- Class "D" combustible metal fires only.
- 30 lb. pressurized dry powder optimized for specific combustible metal
- Range 6-8 ft.
- To activate, must first open nitrogen cylinder on back to pressurize body

Extinguisher Types Summary

<i>EXTINGUISHER TYPE</i>	<i>WORKS BY</i>	<i>EFFECTIVE AGAINST</i>
PRESSURIZED WATER	COOLING	A 
CARBON DIOXIDE	SMOTHERING	B  C 
MULTIPURPOSE DRY CHEMICAL	SMOTHERING	A  B  C 
COMBUSTIBLE METAL	SMOTHERING	D 

Fire Extinguisher Anatomy



Fire Emergency Response Procedures



Rescue



Alarm



Contain



Extinguish



Before you fight the fire

- Ensure area is evacuated
- Always sound the alarm regardless of fire size
- Know locations of extinguishers in your area and how to use them
- Know department emergency procedures and evacuation routes

Criteria for fighting the fire

- Fire is small and contained
- You have safe egress (EXIT) route (can be reached without exposure to fire)
- Available extinguishers are rated for size and type of fire

When fighting the fire remember

- To keep an exit to your back
- When the fire extinguisher is empty - Get out!
- When you leave the building do not go back in!

When not to fight a fire when

- *Fire has spread beyond its point of origin*
- *Your escape path is threatened*
- *The area is smoke filled*
- *Your instincts tell you **GET OUT***

How to Use a Fire Extinguisher



Fighting the Fire

P *Pull the pin*

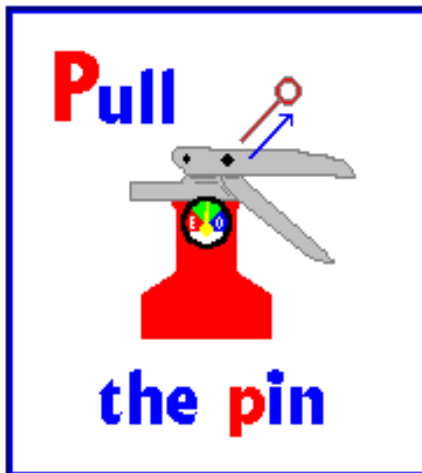
A *Aim low at the base of flames*

S *Squeeze the handle*

S *Sweep side to side*



P.A.S.S. Method



Pull the pin

This will allow you to squeeze the handle in order to discharge the extinguisher.

P.A.S.S. Method

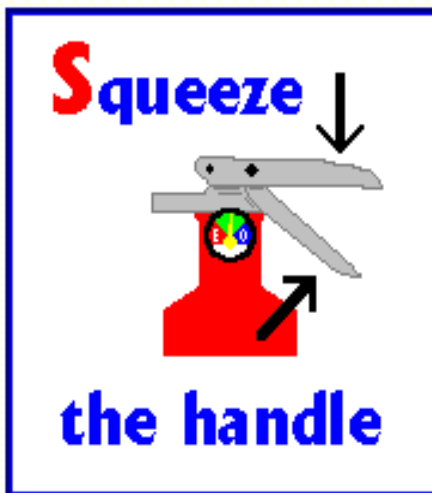


Aim at the base
of the fire

Aiming at the middle
will do no good.

The agent will pass
through the flames.

P.A.S.S. Method



Squeeze the
handle

This will release the
pressurized
extinguishing
agent.

P.A.S.S. Method



Sweep side to side

Cover the entire area that is on fire. Continue until fire is extinguished. Keep an eye on the area for re-lighting.

Summary

- Fire Triangle (Combustion Process)
- Class A, B, C, D, fires
- Types of portable fire extinguishers
- Basic firefighting concepts:
 - R.A.C.E.
 - P.A.S.S.
- Before you fight the fire
- Criteria for fighting the fire
- When not to fight a fire