Fire Extinguisher Training

Still referred to by the original name “The Fire Triangle” the revised term is The Fire Tetrahedron.

The original fire triangle consisted of 3 elements fuel, heat and oxygen, all necessary to sustain fire.

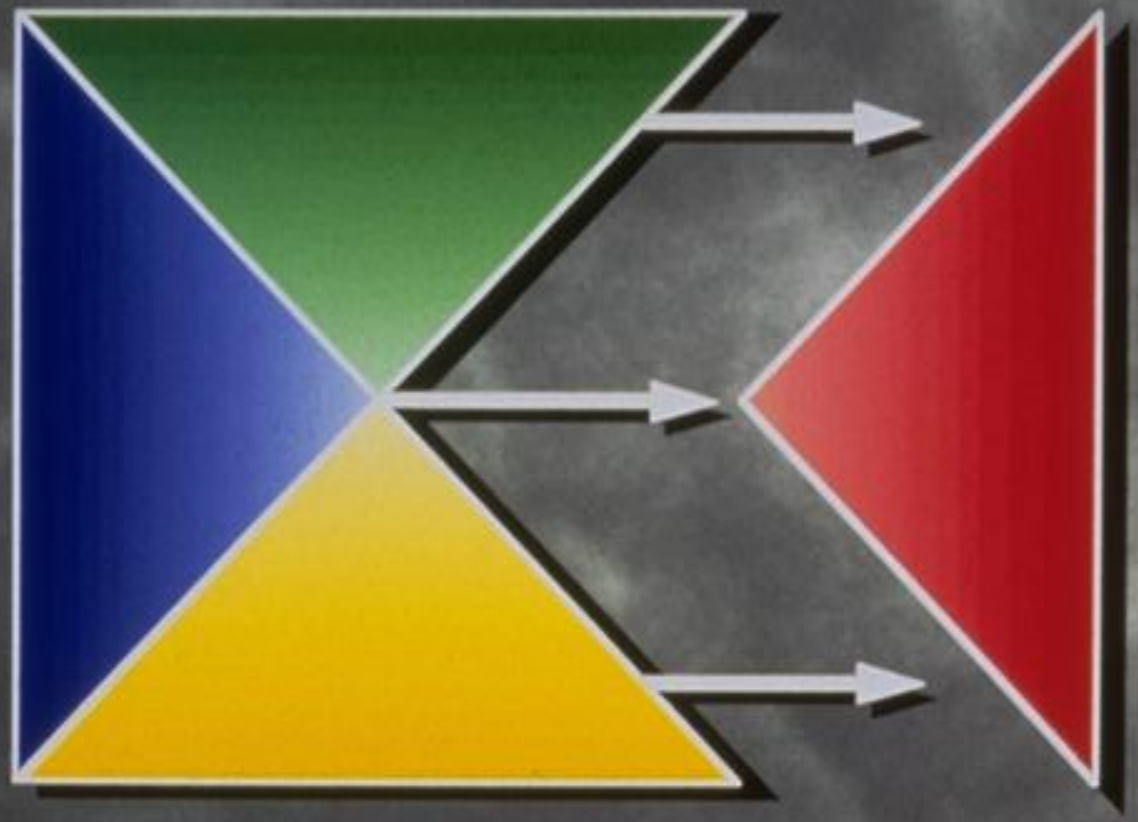
Dry chemical does not remove any of these 3 elements in sufficient quantity to extinguish fire. Some agents like dry chemical and clean agents interfere with the chemistry of fire of by breaking the chemical chain reaction.

The chain reaction has been added to the original fire triangle as a forth element.


FUEL
OXYGEN
HEAT
CHAIN REACTION
FIRE TETRAHEDRON

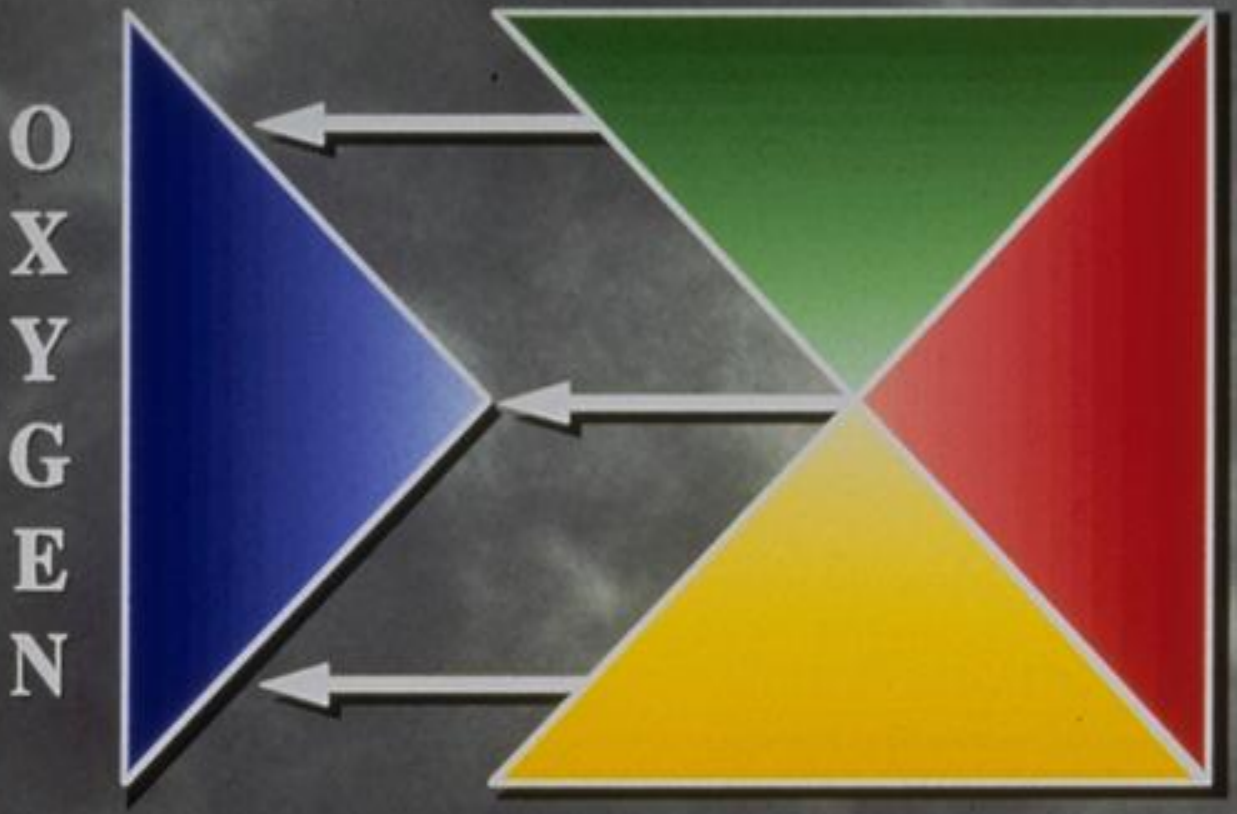
FIRE TETRAHEDRON

Remove Fuel



FIRE TETRAHEDRON

Remove Heat

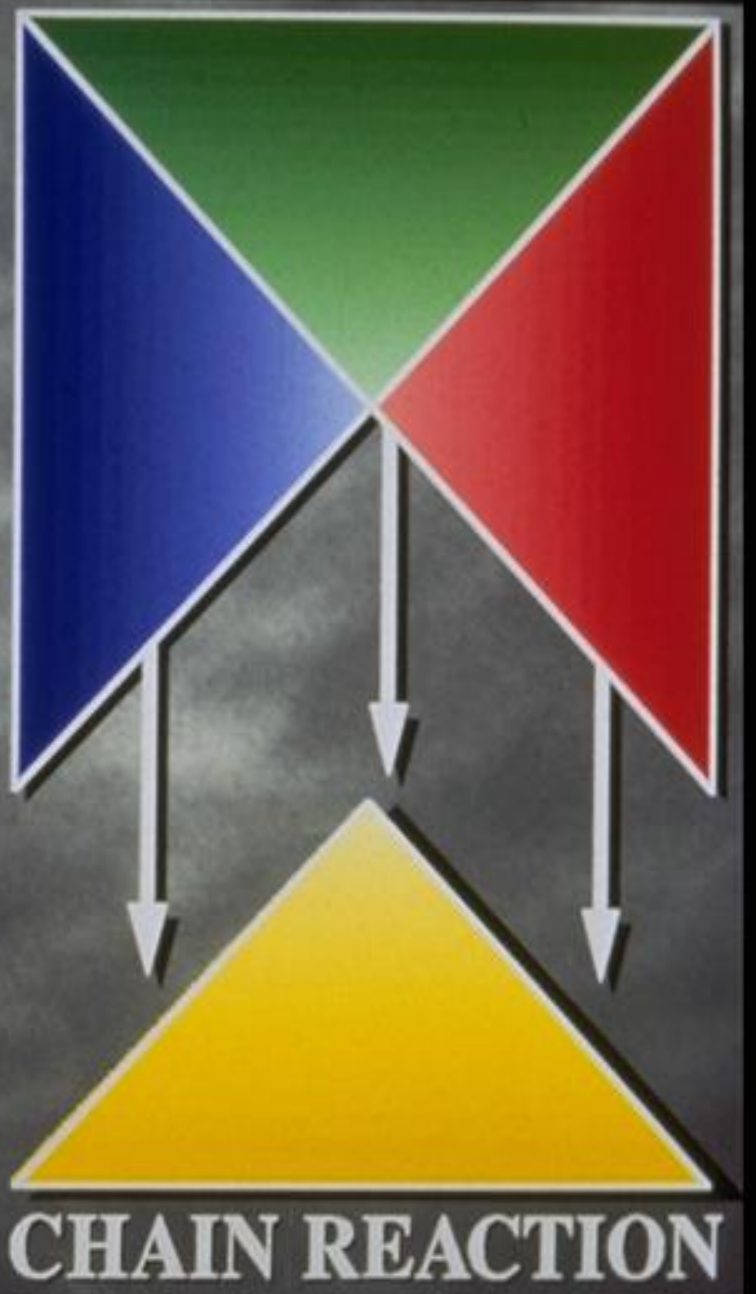


FIRE TETRAHEDRON

Remove Oxygen

FIRE TETRAHEDRON

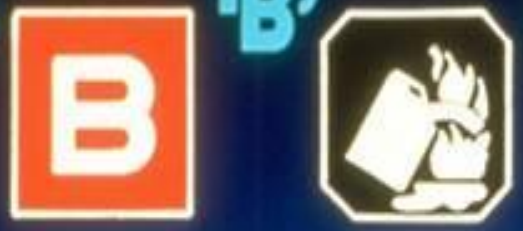
Remove the Chain Reaction



CLASS 'A' FIRE

TYPES OF FIRES	EFFECTIVE AGENTS
COMMON COMBUSTIBLES * TRASH * WOOD * PAPER	* WATER * MULTI-PURPOSE DRY CHEMICAL * FOAMS * CLEAN AGENT

CLASS B 'B' FIRE



TYPES OF FIRES	EFFECTIVE AGENTS
FLAMMABLE LIQUIDS AND GASES	* DRY CHEMICAL
* GREASE	* FOAMS
* GASOLINE	* CLEAN AGENT
* LUBRICATING OILS	* CARBON DIOXIDE (CO_2)
* LNG	

CLASS 'C' FIRE

TYPES OF FIRES	EFFECTIVE AGENTS
ELECTRICAL EQUIPMENT * COMPUTERS * FUSE PANELS * ELECTRICAL MOTORS * SWITCH GEAR	* DRY CHEMICAL * CLEAN AGENT * CARBON DIOXIDE (CO_2)

Keep water and foam extinguishers away from electrical equipment.

CLASS 'D' FIRE

TYPES OF FIRES	EFFECTIVE AGENTS
COMBUSTIBLE METALS * MAGNESIUM * TITANIUM * ZIRCONIUM * SODIUM * LITHIUM	* DRY POWDER * DRY SAND

This is an example of metal turnings on fire.
Dry powder can be applied to this fire using a class D rated (yellow) fire extinguisher or by hand using a shovel or scoop.

Most fire extinguishers are the stored pressure type.

To Operate

P. A. S. S. Acronym

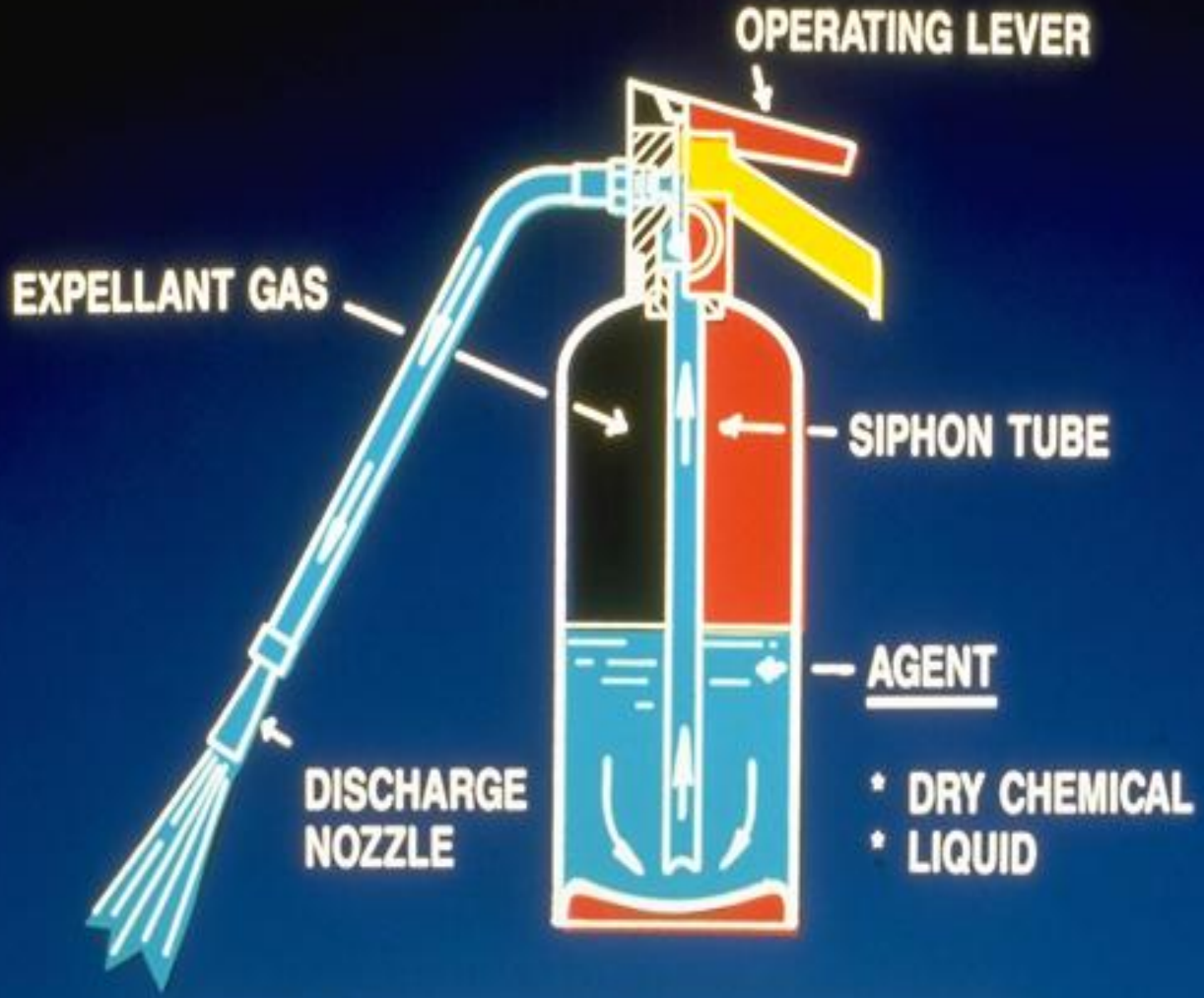
1) Pull the ring pin.
2) Aim at base of flame
3) Squeeze the nozzle valve
4) Sweep from side to side

Once the fire is out keep an eye on it in case it re-ignites.

The pressure within the cylinder forces the agent up the siphon tube and out through the nozzle.
If a stored pressure extinguisher is even momentarily discharged, particles of agent will remain in the extinguisher head assembly preventing a tight seal. This can cause the extinguisher to discharge slowly over time and so it should be removed and serviced. Any extinguisher showing signs of dry chemical at the nozzle should be serviced.


1. Remove Ring Pin
2. Remove Hose
INSTRUCTIONS
1. PULL PIN
2. STAND BACK 8 FEET
3. AIM AT BASE OF FIRE
SQUEEZE
SWEEP
sentry


INSTRUCTIONS
1. PULL PIN
3. Squeeze Operating Lever
4. Apply to Base of Flames/Sweep



STORED PRESSURE EXTINGUISHER

CARBON DIOXIDE (CO_2) LIQUID AGENT (FOR CLASS 'A', 'B', AND 'C' FIRES)

Carbon dioxide extinguishers of 5 lbs or less are equipped with a swivel horn assembly.

Over 5 lbs are equipped with a hose.

These extinguishers are pressurized to over 800 psi and do not come equipped with a gauge partially due to the higher pressures and also because CO2 under pressure fluctuates greatly with temperature.
To confirm the C02 extinguisher is fully charged the extinguisher must be weighed and compared against the charged weigh stamped on the edge of the cylinder skirt.

Since C02 is discharged as a gas it has only half the range of a dry chemical extinguisher. About 4 - 6 feet.

The C02 discharge is extremely cold and residue should not be handled but allowed to melt.

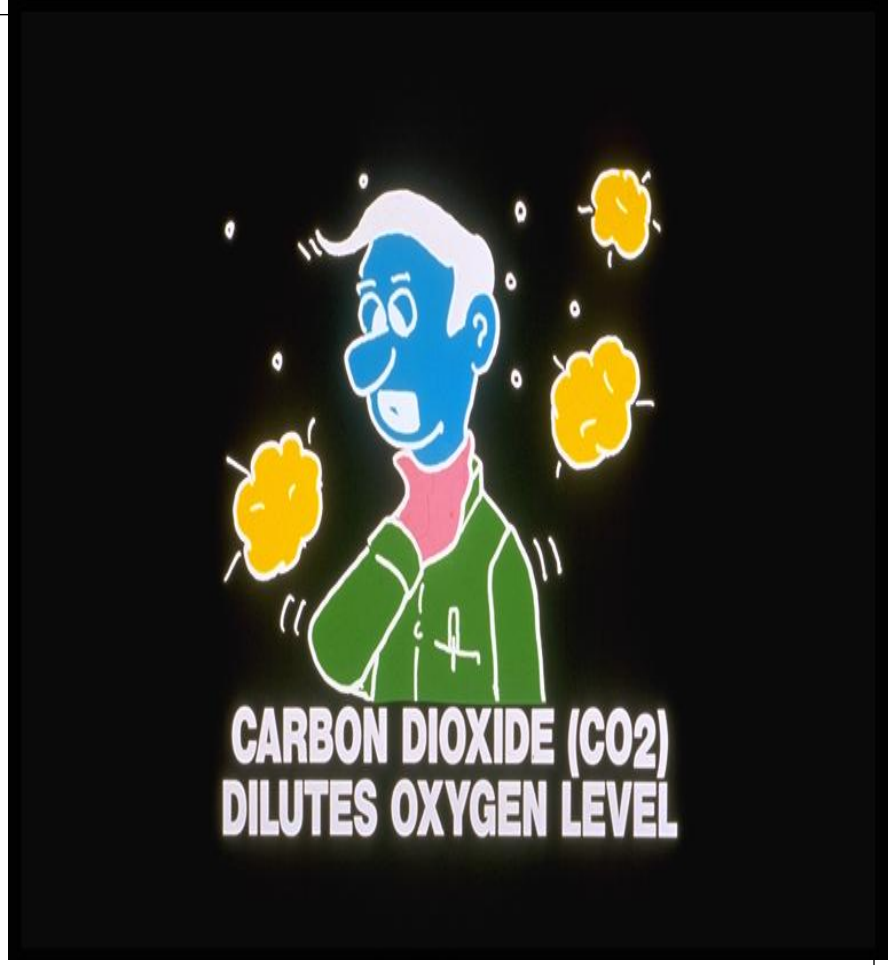
CARBON DIOXIDE (CO_2) LIQUID AGENT (FOR CLASS 'B' AND 'C' FIRES)

In a small room or confined space, fire will deplete the oxygen level as it burns it up in the combustion process.

Products of combustion including smoke are also present in the air.

Discharging a CO2 extinguisher into the environment can cause the oxygen level to drop to dangerous levels.

Once the fire is extinguished, ventilate the area to ensure and adequate supply of fresh air is present before entering the area.



Remember to PASS

Pull the extinguisher's safety pin

Aim the extinguisher at the source of the flames

Squeeze the trigger and hold it

Sweep the source of the flames until the extinguisher runs dry

Quiz

- What class of fire is a likely the fire in a electrical outlet? _____
- Class D fires are what type of fires?_____
- What does PASS stand for?_____
- Where should you aim the extinguishing agent at?_____
- Once the fire is out what should you do?_____
- Name Date
- _____ _____