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STUDY MATERIAL SCIENCE

CLASS-VIII

Date : 13/09/2020

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▶ 6. Combustion

Fire Extinguisher :

To sustain a fire, three things are critical, **fuel, heat and oxygen**. If any one of the three conditions is eliminated, manually the fire cannot be sustained. Most fire fighting operations rely on the other two-cooling the fire and cutting off the supply of oxygen because removing the fuel from burning site is not possible.

The best material for cooling is **water**.

However, water cannot be used during oil fires since it would simply sink to the bottom and may even spread the burning oil, making the fire worse.

If water is used in an electrical fire, there is a risk of electrocution. That is why specific agents are used to extinguish different types of fire.

Definition : Fire extinguisher is a manually operated device, used to cut off the supply of air or to bring down the temperature of the fuel, or both.

Fires can be classified into three types.

Depending on the type of fire , the appropriate fire extinguisher may be used :

Class A : Extinguisher use water under pressure to put out ordinary fires caused by burning wood, plastic or paper. The water puts out the fire by cooling the burning material below its ignition temperature.

Class B : extinguishers use foam or carbon dioxide to extinguish fires caused by petrol. diesel or A fire extinguisher grease. The foam or carbon dioxide forms a layer over the burning oil or grease and cuts off the supply of air, thereby extinguishing the fire.

Class C : extinguishers use carbon dioxide or dry powder to put out electrical fires by cutting off the supply of oxygen. Carbon dioxide extinguishers are commonly used in restaurants because they do not contaminate the cooking utensils or food.