



The dangers of fire

Smoke and toxic gases can be as deadly as heat and flames. Actually, the majority of people die or get injured in fires because of exposure to hazardous smoke and toxic gases and not actual burns. In addition, smoke often obscures vision and thereby decreases the ability of fire victims to escape. Carbon monoxide poisoning is the major cause of death following smoke inhalation.

What is fire?

Fires start in three main ways:

1. Accidents (e.g. misuse of appliances, dropping a cigarette or match on a sofa or mattress, etc.)
2. Deliberate ignition or arson
3. Equipment failure including electrical malfunctions and overheating

Fire is the result of a chemical reaction between oxygen and some sort of fuel (for example a TV or sofa). When a heat source, such as a candle or a cigarette, heats the fuel to its ignition temperature, a combustion reaction is triggered and a fire is the result.

How to prevent fire?

The best solution to stop a fire is to prevent it from starting. To avoid a fire from developing or spreading, the chemical reaction between the oxygen, fuel and heat source has to be prevented or broken.

This can be done by taking away one of the three elements, needed to keep the chain reaction going.

And that is exactly what [flame retardants](#) are designed to do.

