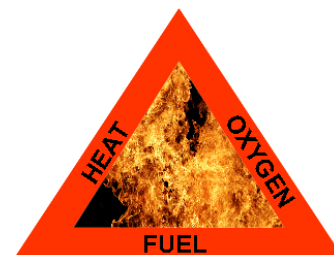


Fire, fire extinguishers and systematic fire prevention work

Fire

In order for a fire to start there must be combustible material (fuel), oxygen and heat. The fire will go out if one of these three factors is removed. In *removal* the fuel is isolated, in *smothering* the oxygen supply is reduced and in *cooling* the fuel's temperature is brought below its ignition temperature.






Fire extinguishers

Different types of fire extinguishers are suitable for extinguishing fires in different materials. This is why suitable fire extinguishers are placed in strategic locations in the building. The fire extinguisher's location is marked with a sign and stated on the **Emergency Escape Plan**. A large hand-held fire extinguisher (5-10 kg) empties in 20-30 seconds and can reach up to 3-4 m. It is therefore important to know how it should be used in order for it to be effective.

How to use the fire extinguisher:

- Carry the extinguisher by the lower handle and remove the pin by pulling the ring straight out
- Bend down and get as close to the fire as possible
- Hold the mouthpiece firmly and aim it at the flames
- Release the extinguisher by pressing down the upper handle

<p>Powder extinguisher</p> <p>Powder extinguishers put out most types of fires and are very effective. The disadvantage is that powder makes a mess and is difficult to clean up – but so do fires! You should therefore avoid using powder extinguishers in rooms with sensitive equipment. Powder does not conduct electricity, which means that you can extinguish fires in electrical equipment.</p>		<p>Carbon dioxide extinguisher (CO₂ extinguisher)</p> <p>Contains carbon dioxide gas that extinguishes fire quickly and “cleanly” but is poor at putting out embers. When putting out fires with CO₂ the fire can reignite before the burnt object has had a chance to cool. CO₂ does not conduct electricity and is therefore used to extinguish fires in electrical equipment. CO₂ is very cold and should thus not be used for putting out fires in clothing.</p>	
<p>Foam extinguisher</p> <p>Foam extinguishers are effective on fires in fibrous material (e.g. wood, paper and textiles) and on burning fluids. The foam lies on top of the fire, putting it out and cooling it down. The foam then remains as protection from re-ignition.</p> <p>Just like water, foam conducts electricity so foam and water are thus not suitable for extinguishing burning electrical equipment.</p>		<p>Water extinguisher</p> <p>Used on fires in fibrous material. Water is poor at extinguishing fires in petroleum products because these fluids float on top of water. Water conducts electricity so it is thus not suitable for extinguishing burning electrical equipment.</p> <p>It can be extremely dangerous to try to extinguish hot oils with water. When the water touches the hot oil it evaporates explosively, resulting in a violent reaction in which burning oil is thrown in all directions.</p> <p>Water extinguishers are currently being replaced by foam or powder extinguishers.</p>	

NB. The Swedish Consumer Agency recommends: homes: 9 kg foam or a 6 kg powder extinguisher and for the car/boat/caravan: 2 kg powder extinguisher.

Systematic Fire Prevention

LTH continually carries out Systematic Fire Prevention¹ for organising, training, documenting and controlling fire prevention measures. One aspect of this that everyone notices are the regular evacuation exercises that are evaluated in cooperation with the fire and rescue services. If you have any questions, suggestions for improvements or want to highlight faults in the fire prevention measures, please contact LTH's information desk in Studiecentrum, phone: 046-222 7200 or e-mail: info@lth.se

¹according to the Swedish Civil Protection Act, SFS 2003:778 which came into force on 1 January 2004.