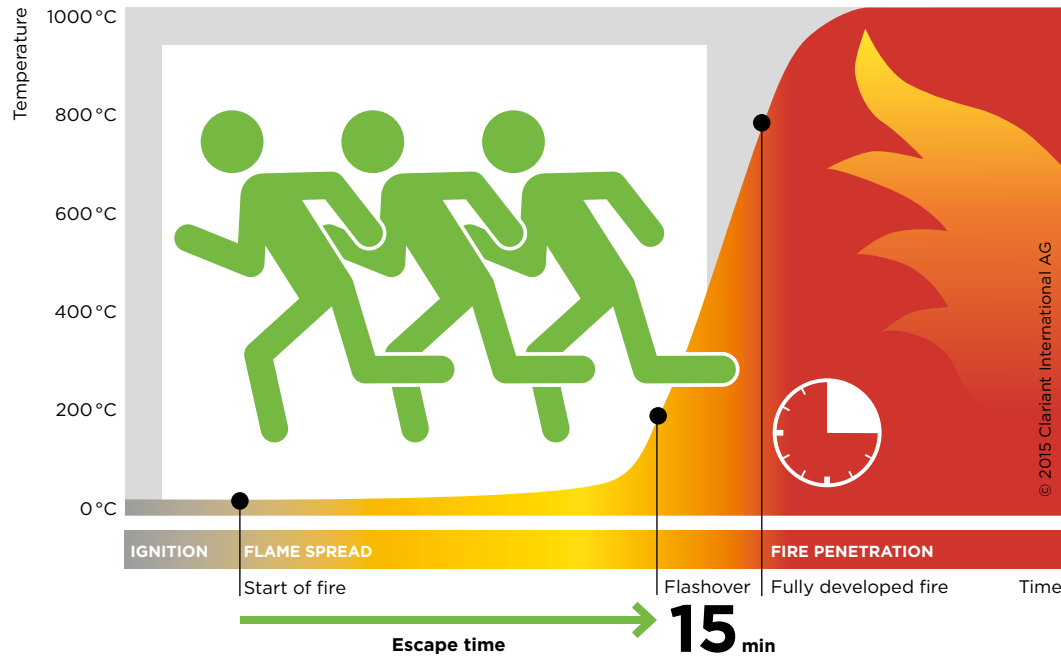


# How Flame Retardants can increase escape time in fires

## WITH FLAME RETARDANTS



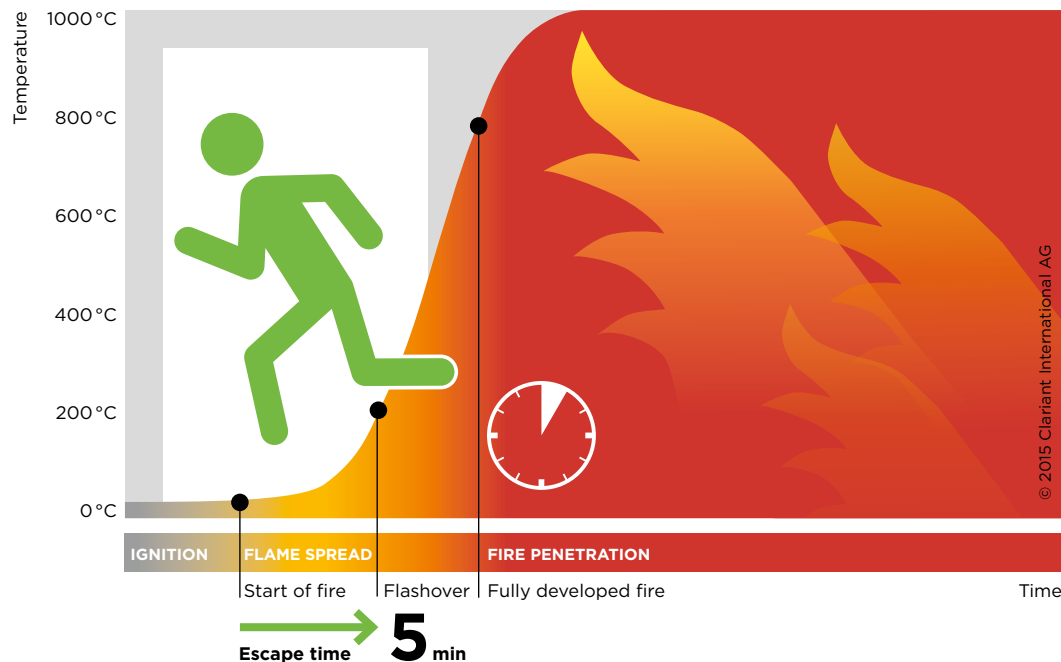
Flame retardants reduce the risk of ignition and fire spread of many plastic and textile materials which results in more available escape time for occupants.

Time to flashover can increase from 5 minutes to 15 minutes which can make the difference between escape and fatalities.




Bear in mind that the escape time includes the time to discover the fire, alert other people, take the decision to call the fire brigade, take own actions to extinguish or take the decision to evacuate the building.

The times and temperatures in the graphs are typical numbers, but can vary according to the circumstances and materials involved.

## WITHOUT FLAME RETARDANTS



## THE 3 PHASES OF FIRE AND THE PROTECTING FEATURES OF FLAME RETARDANTS

- 
**Ignition source**
  - Prevent ignition
  - Possibly self-extinguish
- 
**Flame spread (reaction to fire)**
  - Slow down flame spread
  - Reduce heat release
  - Delay flash-over
- 
**Fire penetration (resistance to fire)**
  - Prevent the collapse of structures, e.g. steel columns protected by intumescent coatings
  - Prevent fire moving to adjacent room or building compartment