



METALTEK
Metalurji Sanayi ve Ticaret A.Ş.

PC FLAME RETARDANT AGENT

INTRODUCTION

Flame retardants (FR) are chemical compounds added with an objective to inhibit/retard the ignition/burning of the plastic. To prevent combustion, it becomes necessary to design a thermally stable polymer that has a lesser probability of decomposing into combustible gases under heat stress.

PC Flame Retardant Agent, a kind of white powder, is an additive specially used for PC resins. The main component is organic fluorine derivatives without bromine and chlorine elements.

WHY USE FLAME RETARDANTS?

Flame Retardants Contribute Directly to the Saving of Lives

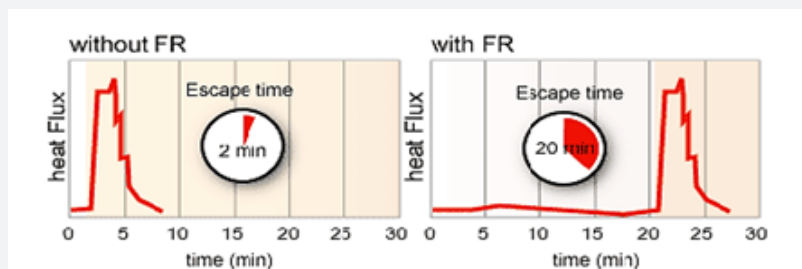
In most cases polymers initiate or propagate fires because, being organic compounds, they decompose to volatile combustible products when they are exposed to heat.

However, in many fields such as electrical, electronic, transport, building, etc., the use of polymers is restricted by their flammability, whatever the importance of the advantages their use may bring.

The present diffusion of synthetic polymers has greatly increased the "fire risk" and the "fire hazard" that is respectively the probability of fire occurrence and its consequence either on humans or on structures.

To fulfil these legal requirements, flame retardants need to be added into the polymer. In order to increase the escape time of persons, the role of these additives is to:

- ◆ Slow down polymer combustion and degradation (fire extinction)
- ◆ Reduce smoke emission
- ◆ Avoid dripping





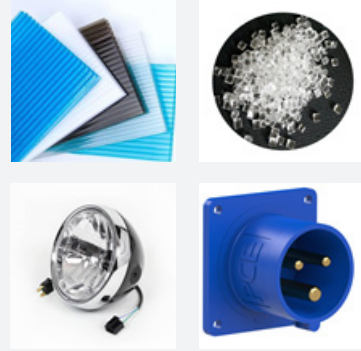
FLAME RETARDANT AGENT APPLICATIONS / FEATURES

Features:

- ◆ Environmental safety, No Br, Cl, P containing
- ◆ Low level addition 600-1000ppm, high flame retardance efficiency
- ◆ Minimum resin physical and optical property impact
- ◆ Excellent thermal resistance

Application:

- ◆ PC film and sheet
- ◆ PC injection parts
- ◆ Headlight
- ◆ PC electric fittings
- ◆ PC modified materials
- ◆ PC compounding



SUPPLIED FLAME RETARDANT AGENT

Lanpoly (China), the producer of these flame retardant agents, won the title of Chinese National High-tech Enterprise in 2017.

Lanpoly PC Flame Retardant Agent only needs very low additive amount (500-5000 ppm), producing no influence on the transparency and physical properties of PC resins. Due to no large volume of smoke or toxic corrosive hydrogen bromide/chloride when burning, PC Flame Retardant Agent is environmentally friendly and is gradually becoming the mainstream products of polymer flame retardants. Lanpoly mainly provides two grades of PC halogen-free retardant agent:

Code	FR1100	FR1200
Appearance	White powder	White powder
Addition Level (%)	0.08-0.1	0.1-0.5
Composition	KFBS	Sulfonate KSS
Features	FR1100 Environmentally friendly, no influence on product transparency, high transparency.	FR1200 Environmentally friendly, slight influence on product transparency.