



Turkish Plastics Industry Foundation

Fire Safety in Buildings

▪ Fire Safety is at the heart of our industry

Plastics are used in a wide and growing range of building and construction applications, from durable pipes and window frames to state of the art insulation solutions. Fire safety has always been and continues to be a major objective for the plastics industry and an integral part of product design and manufacturing. Over the years, improvements to building fire safety standards and increased efforts by products manufacturer, including those from the plastics industry to develop plastic materials and products with lower ignitability and limited impact on fire spread have contributed to the ongoing reduction of fatalities and injuries and property damage due to fire. PAGEV supports strict rules for safe application of construction products and the development of improved fire safe constructions.

▪ Harmonised standards for construction materials ensure safety

Products used in building and construction are subject to a number of standards and regulations depending on their function and their use. In the EU, since 2011 the Construction Products Regulation requires all building and construction products to be tested and classified for their fire performance according to a harmonized classification system for reaction to fire. Based on these test methods and classifications, which are reviewed and updated regularly, EU Member States have included different requirements for fire performance of these products in their national legislation.

▪ Fire Safety in buildings is not only determined by the choice of the material alone

The type (and quantity) of materials involved, is only one of the various parameters influencing the development and consequences of a fire. There are many other factors that come into play such as building designs, location, potential ignition sources, ventilation conditions and environmental factors. For instance, while the use of plastics in buildings has almost doubled in the last 30 years in Western Europe, fire fatalities have decreased by 65%. A specific example comes from Germany where plastic insulation has the largest market share and where the amount of fire casualties is only half as high as in Denmark, where traditionally mineral materials are used for insulation.

▪ Mandatory fire detection tools increase fire safety

Casualties due to fire usually occur when an interior element or content of a building is set on fire and the inhabitants are not alerted or cannot escape. It is precisely at this point where safety measures have to be improved, for example through mandatory fire detectors and sprinklers or shorter escape routes. Only at a later



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stage, when the inhabitants should have had time to leave the building, might the fire spread to the construction products of the building.

Key recommendations:

1. Maintain a level-playing field for all materials

All materials have specific properties and applications. Manufacturers, designers or architects should be able to choose from a range or combination of products including plastics, depending on their needs, providing that they comply with relevant regulations on fire safety.

2. Fire Safety measures should focus on stopping the fire at source and alerting inhabitants

There is enough evidence to prove that the mandatory use of fire detection devices and sprinkler systems significantly reduces the risk of fire casualties.



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