PlasticsEurope
Association of Plastics Manufacturers

Fire Safety in Buildings

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- **Fire Safety is at the heart of our industry**
  Plastics are used in a wide and growing range of durable building and construction applications, from pipes and window frames to state of the art insulation solutions. Fire safety has always been and continues to be a major priority for the plastics industry. In fact, it is an integral part of product design and manufacturing. Over the years, building fire safety standards and regulations have improved. Product manufacturers - including those from the plastics industry- have increased their efforts to develop materials and products with lower ignitability and limited impact on fire spread. All these measures have contributed to the ongoing decline in the number of fires and fatalities due to fire.

- **Fire safety in buildings is not determined by the behaviour of a material alone**
  The type (and quantity) of materials involved in a fire, is not the only parameter influencing the development and consequences of a fire. There are many other factors that come into play, notably building design and content, but also active safety measures, location, potential ignition sources, ventilation conditions, and environmental factors. In particular, the smoke toxicity of a building fire cannot be determined by the sole evaluation of the smoke toxic potency of individual construction products and materials. It is strongly dependent on the fire scenario (e.g. room size, temperature, ventilation) and on exposure time. Therefore, it is essential to reduce the smoke exposure by taking a holistic approach on fire safety.

- **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, the Construction Products Regulation requires since 2011 that all building and construction products have to be tested and classified depending on their fire performance and according to a harmonised classification system for reaction to fire. Based on these test methods and classifications, which are reviewed and updated regularly, EU Member States have included their requirements for the fire performance of these products in national legislation.

- **Mandatory fire detection tools, inspection, public education and safety measures increase fire safety**
  Casualties from fire usually occur when an item of the building content catches fire and the inhabitants are not alerted or escape routes are inaccessible. It is precisely at this point where safety measures must be improved, for example via mandatory fire detectors and sprinklers, public education or fast and safe escape routes. These measures should ensure that in most cases the fire spreads to the construction products only after the inhabitants have had time to safely escape from the building.

Key recommendations:

1. **Maintain the current construction products evaluation framework and enforce existing national regulations**
   The EU regulates construction products with the Construction Products Regulation, through a proper evaluation set of fire characteristics. Members States are more effective in setting requirements according to their local specificities Enforcing the application of existing national rules should, however, be better ensured.

2. **Improve fire prevention and public education**
   Prevention and public education are essential to avoid fire fatalities and injuries.

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