PRESS RELEASE

New ways for recycling quotas: Sustainable plastics containing flame retardants for use in closed-loop applications

The development of high-quality, halogen-free flame retardants (hffr) for recycled plastics to meet increasing recycling quotas is a major challenge. The Fraunhofer Institute for Structural Durability and System Reliability LBF is looking for partners for the new project "hffr-Up2Cycle". The main objective of this project is to upgrade PCR materials with halogen-free flame retardants (hffr) and to investigate these materials through the simulation of closed-loop processes for plastics containing flame retardants in the sections of electronics, automotive, construction and cable applications. The project is aimed at OEMs, manufacturers of plastic components, raw material suppliers, compound developers and industry associations.

Achieve recycling rates through targeted re-stabilization

In view of the recycling quotas envisaged in many industries and the associated increasing demand for recycled plastics, "hffr-Up2Cycle" focuses on upgrading them for use in high-quality hffr applications. The tailor-made re-stabilization of the recycled plastics used is intended to show how the targeted upgrading of recyclates can be used to achieve recyclate quotas and circular applications for plastics containing flame retardants. The project investigates the flammability of processed and recycled PCR materials such as polyolefins (PP, PE), PET, PC/ABS, PA and flexible PU foam.

The aim is to optimize the formulations to achieve the best flame retardant ratings as well as mechanical and long-term properties. Another focus is to identify strategies to improve available recyclates coming from low value streams into selected higher value flame retardant applications. The selection and characterization of commercially available PCR materials and the analytical evaluation of flame retardants in PCR polymers, including testing of closed-loop processes, are driving the project.

Improvement of flame retardant ratings and mechanical properties

Fraunhofer scientists are looking for partners with whom they can implement research scientists' findings in a demand-oriented manner, thus closing the gap between basic research and industrial development. Together, they develop customized solutions for the current challenges in the plastics industry.

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OEMs and manufacturers of plastic components, particularly in the automotive, electrical and electronics and construction sections, raw material suppliers, compound developers and manufacturers of plastic recyclates, can benefit from the results. Those responsible for regulatory compliance (PRRC) and industry associations along the value chain are also addressed.

More information about the project: www.lbf.fraunhofer.de/hffr-up2cycle-en
www.lbf.fraunhofer.de/hffr-up2cycle-en?utm_campaign=PI-VP-up2cycle-en

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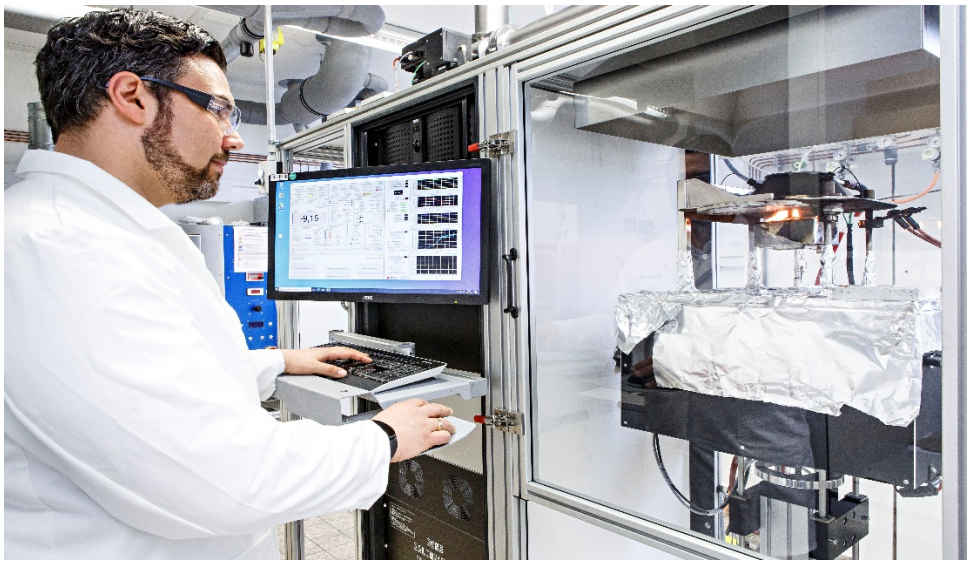

The "hffr-Up2Cycle" project aims to optimize the flammability and mechanical properties of recycled materials such as polyolefins, PET and PA to make them usable for high-quality applications. Photo: Fraunhofer LBF

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