**No Shortcuts with TPE in Smart Food Containers**

Recent [food safety and packaging](https://www.kraiburg-tpe.com/en/innovative-packaging-solutions-tpe-material) waste regulations have driven the development of smart food containers. Using sensors, active materials, and digital features, these containers monitor freshness, extend shelf life, and encourage mindful consumption and disposal. They reduce food waste and limit excessive packaging. However, recyclability, food contact safety, and durability remain key challenges as manufacturers seek more sustainable solutions.

Thermoplastic elastomers (TPEs) are ideal for [smart food packaging](https://www.kraiburg-tpe.com/en/enhancing-smart-bottle-functionality-advanced-tpe-solutions) due to their exceptional properties, including enabling secure packaging features. KRAIBURG TPE, a global manufacturer of advanced TPEs, offers recyclable and versatile TPE solutions for smart food storage applications.

**Excellent adhesion for secure closures**

KRAIBURG TPE delivers the requirements for food containers to be both secure and easy to use. TPEs bond strongly with polypropylene (PP), enabling seamless overmolding onto container lids or bodies without extra adhesives. This creates tight seals that preserve freshness while allowing ergonomic designs for easier and more convenient opening and closing.

**Safety compliant and recyclable**

KRAIBURG TPE’s materials meet strict international [food contact](https://www.kraiburg-tpe.com/en/controlled-migration-tpe) regulations, including Regulation (EU) No 10/2011, US FDA CFR 21, and GB 4806.7-2023. Free of animal-derived ingredients, these TPEs are well suited for brands focused on ethical sourcing and consumer safety. The grades are [ISCC PLUS ready](https://www.kraiburg-tpe.com/en/iscc-plus-certification), supporting sustainable manufacturing through a mass balance approach. They are also certified by Cyclos HTP for compatibility with HDPE and PP recycling.

**Sustainability from the get-go**

At KRAIBURG TPE, [sustainability](https://www.kraiburg-tpe.com/en/sustainability) drives our innovation. Our portfolio includes bio-based TPEs and compounds with post-consumer (PCR) and post-industrial (PIR) recycled content. Selected TPEs are certified under GRS and ISCC PLUS. We also provide [Product Carbon Footprint (PCF)](https://www.kraiburg-tpe.com/en/product-carbon-footprint-calculator) data upon request to support sustainability decisions.

We proudly earned the EcoVadis Gold Medal in 2025 and are committed to the Science Based Targets initiative (SBTi), aligning our goals with global climate action.

From reducing emissions to increasing circularity, our sustainable TPEs deliver reliable performance and are available worldwide to support your applications while advancing your sustainability goals.

**Get in touch today** to learn how KRAIBURG TPE can support your sustainability and product development journey.

*Disclaimer: The applications mentioned are illustrative of material capabilities only. Final product suitability and regulatory compliance must be assessed and validated by the customer.*

A black and blue square cooking pot

AI-generated content may be incorrect.**(Photo: © 2025 KRAIBURG TPE)**

For high-resolution photography, please contact Bridget Ngang ([bridget.ngang@kraiburg-tpe.com](mailto:bridget.ngang@kraiburg-tpe.com) , +6 03 9545 6301).

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KRAIBURG TPE (www.kraiburg-tpe.com) is a global manufacturer of custom thermoplastic elastomers. KRAIBURG TPE was founded in 2001 as an independent business unit of the KRAIBURG Group and is now the industry's competence leader in the field of TPE compounds. The company's goal is to provide safe, reliable and sustainable products for customer applications. With more than 700 employees worldwide and production sites in Germany, the USA and Malaysia, the company offers a large product portfolio for applications in the automotive, industrial and consumer goods industries, as well as for the strictly regulated medical sector. The established THERMOLAST®, COPEC®, HIPEX® and For Tec E® product lines are processed by injection molding or extrusion and offer manufacturers numerous advantages not only in processing but also in product design. KRAIBURG TPE is characterized by its innovative strength, global customer orientation, customized product solutions and reliable service. The company is ISO 50001 certified at its headquarters in Germany and holds ISO 9001 and ISO 14001 certifications at all its sites worldwide.