**KRAIBURG TPE Materials Enhance PPE Performance for Occupational Safety**

High-altitude work in construction, utilities, and industrial maintenance increases occupational risks. Workers rely on personal protective equipment (PPE) that delivers grip, durability, and comfort under constant use. Material selection determines how PPE performs under these conditions.

KRAIBURG TPE, a global manufacturer in thermoplastic elastomer (TPE) compounds, offers innovative material solutions suitable for PPE used in high-risk, high-contact environments.

**Material properties for secure handling**

PPE components are subject to repeated stress, frequent handling, and abrasion from rough surfaces. KRAIBURG TPE compounds provide stable mechanical performance and consistent grip, its flexible over a wide temperature range to ensure reliable handling in various working environments. The materials bond well to polypropylene (PP), which allows efficient overmolding and strong bonding in multi-material designs. Selected TPE grades can also be overmolded onto other plastics or metals to support complex component integration.

Manufacturers can use soft-touch TPE for high-altitude work safety to improve handling and reduce hand strain during long tasks. The smooth surface and controlled elasticity enabling users to maintain a firm grip during repetitive motion.

**Abrasion resistance for extended service life**

High-altitude PPE often comes into contact with tools, edges, and abrasive surfaces. KRAIBURG TPE develops [TPE with good abrasion resistance](https://www.kraiburg-tpe.com/en/scratch-resistance-tpe) to reduce surface wear and extend product life. UV and weather-resistant grades are available, making these materials suitable for outdoor applications exposed to harsh environmental conditions. These properties of KRAIBURG TPE solutions make them suitable for grips, handles, flexible joints, and protective elements where material failure could compromise safety.

**Design flexibility for PPE manufacturers**

KRAIBURG TPE materials allow [full colorability](https://www.kraiburg-tpe.com/en/coloring) for visual identification and functional differentiation. The compounds process efficiently and accommodate ergonomic shapes and compact designs. These features make them practical TPE for PPE applications such as gloves, harness components, grip zones, seals, and soft-touch interfaces.

**Versatile range of applications across industries**

KRAIBURG TPE materials are used in a range of applications requiring ergonomics, durability, and design flexibility. Common uses include car mats, functional and design elements, tool handles, [toolboxes](https://www.kraiburg-tpe.com/en/smart-tpe-solutions-tough-sustainable-toolbox-handles), ski poles, and soft-touch surfaces such as thumb wheels, push buttons, and switches.

**KRAIBURG TPE at CHINAPLAS 2026**

[KRAIBURG TPE will exhibit at CHINAPLAS 2026](https://www.kraiburg-tpe.com/en/chinaplas), from **21–24 April 2026** at the **National Exhibition and Convention Center (NECC) Shanghai, China, Hall 7.2, Booth D13**. Visitors can explore the company’s portfolio of TPE materials and access the free **one-on-one consultations** with technical experts for material recommendations and application support.

**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) 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.

**Discover More with TPE**: From [ladder stopper](https://www.kraiburg-tpe.com/en/enhancing-safety-and-performance-ladder-stopper) to [footwear innovation](https://www.kraiburg-tpe.com/en/reliable-tpe-materials-footwear-innovation) and [security devices](https://www.kraiburg-tpe.com/en/tpe-seal-technology-tailored-security-devices), explore how our TPE solutions bring safety, durability, and innovation into everyday living.

***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 close-up of a harness with carabiners

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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.