KRAIBURG TPE has developed a compound as material for handle surfaces, which combines the best grip and adhesion properties with 57 percent recycled content.

**Recycling Content TPE for handle surfaces for  
Hilti tools**

**By developing Recycling Content TPE with excellent adhesion to PA, Hilti and KRAIBURG TPE have now successfully expanded their partnership to also include projects with focus on sustainability. The starting point for expanding a more than two decades long collaboration was the increasing emphasis that both companies put on the expansion of sustainable strategies and initiatives – especially where these can be incorporated into the development of new products and product components on a larger scale. As part of the Supplier Recognition Model, KRAIBURG TPE also receives the “Distinguished Honors – Special Products” award from Hilti.**

Waldkraiburg, October 1, 2024 – The project cooperation between Hilti, the tool manufacturer, and KRAIBURG TPE, which started in 2021, was aimed at developing a recycling compound that can be used as a surface material for polyamide-based tool handles. After the requirements for the thermoplastic elastomer (TPE) to be newly designed had been defined, KRAIBURG TPE started to develop the new material in the summer of 2021. The main goal was to integrate a maximum high proportion of PIR and PCR raw materials into the formulation. In other words, materials that could be reused from both industrial waste materials (PIR = post-industrial recycled) and private households (PCR = post-consumer recycled).

It was also necessary to retain the existing properties of the TPE already in use. These included the defined hardness range and in particular the adoption of the distinct adhesion to PA. In addition, the flowability of the thermoplastic elastomer was further improved during the subsequent development process. The newly developed Recycling Content TPE enabled KRAIBURG TPE’s development team to supply the customer with a compound early in 2023 that still meets the key requirements for the existing material, but at the same time contains a high proportion of recycled raw materials. Karin Maier, customer manager for Hilti at KRAIBURG TPE, explains: “Taking into account the required properties, we have developed a formulation that provides a recycled content of significantly more than fifty percent. Lower density results in weight savings – with the quality remaining the same.” According to Karin Maier, other optimizations of sustainability factors in the production cycle were also made such as savings in CO2 consumption and consolidation of materials. She adds: “The result satisfied us, but, what’s more, it satisfied our customer!”

In direct connection with the successful use of the Recycling Content TPE, the development teams of both companies examined further options for sustainable applications with high recycled content. Universal PCR TPE, which had already been developed in the course of 2021, proved to be particularly suitable for handle applications for Hilti tools. Eugen Andert, Project Manager, says: “We were able to incorporate experience that we and our customers had gained from specific applications into the design of the subsequent second generation. The result was a TPE with a proportion of PCR of almost eighty percent.”

The new Universal PCR TPE is suitable for a variety of consumer and industry applications such as handle and soft touch surfaces, fastener devices as well as functional and design elements, and will also be used for tools from Hilti from 2024.

**Honored strong partnership**

The long-standing partnership between Hilti and KRAIBURG TPE has recently been honored. As part of its “Supplier Recognition Model”, Hilti awarded particularly sustainable suppliers, which emerged as winners in their categories, at the company’s headquarters in Liechtenstein. KRAIBURG TPE was able to secure first place in the special products category. The evaluation was based on the following criteria: Innovation, sustainability, quality, proactivity, performance, reliability, processing times and company culture.



**Fig. 1:** KRAIBURG TPE meets the exacting standards for surfaces: 57% recycled content and the best grip and adhesion properties. (© Hilti)



**Fig. 2:** Eugen Andert, Project Manager at KRAIBURG TPE (©KRAIBURG TPE)

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**Fig. 3:** The winners of this year’s Hilti awards at the company headquarters in Liechtenstein, including KRAIBURG TPE as special projects category winner. (© Hilti)

**Information for press representatives**

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**About KRAIBURG TPE**

KRAIBURG TPE ([www.kraiburg-tpe.com](file:///\\file-ktd\Organisation$\MV\MV_TCC\01_PR_Content\01_PR_Agency\Press_Releases\2022\2022_PressReleases\KTD\06_K-Preview\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 660 employees worldwide and production sites in Germany, the USA and Malaysia, the company provides 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.