

Press Release

**How Can Mouthguard Manufacturers Achieve Better Comfort, Safety, and Durability?
KRAIBURG TPE's THERMOLAST® H Series Enables Advanced Oral Protection Designs**
Kuala Lumpur, October 2026
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How Can Mouthguard Manufacturers Achieve Better Comfort, Safety, and Durability? KRAIBURG TPE's THERMOLAST® H Series Enables Advanced Oral Protection Designs

Mouthguard manufacturers and product engineers today face increasing challenges in developing oral protection products that deliver long-term comfort, durability, hygiene, and user safety. With growing demand from sports, dental care, and nighttime protection applications, selecting the right material has become essential to ensure mouthguards can withstand repeated oral use while maintaining elasticity, dimensional stability, and compliance with strict healthcare requirements. Material solutions must also support efficient production, design flexibility, and customization to meet evolving market expectations.

KRAIBURG TPE, a global manufacturer of thermoplastic elastomers (TPEs) and customized material solutions for healthcare and medical applications, offers its [THERMOLAST® H Series](#) for mouthguard components. Designed for functional and design elements, seals, flexible connections, mouthpieces, and closures, the compounds enable efficient processing while fulfilling medical-grade performance requirements.

Material advantage for durable performance

THERMOLAST® H Series is suitable for use in mouthguard devices that require materials capable of maintaining shape and function during continuous use. It features optimized compression set properties that allow components to retain elasticity and dimensional stability for prolonged service life and even with repetitive intraoral use.

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Design Flexibility for Multi-Material Mouthguard Applications

THERMOLAST® H Series supports the production of durable multi-material mouthguard components through [injection molding](#), providing greater design flexibility while maintaining reliable performance in medical and dental applications.

How can sterilizable TPE support hygiene requirements for mouthguards?

THERMOLAST® H Series, used in the manufacture of mouthguard, allows these oral care products to withstand autoclave sterilization at 121°C and ethylene oxide (EtO) treatment while meeting hygienic requirements without performance loss.

Biocompatible, non-toxic materials for user safety

THERMOLAST® H series contains no animal-derived ingredients and are free from PVC, silicone, latex, and substances of very high concern (SVHC) under EU REACH. All raw materials comply with Regulation (EU) No 10/2011 and FDA CFR 21 requirements, with biocompatibility tested according to ISO 10993-5 and GB/T 16886.5 (Cytotoxicity), and meet the requirements of the RoHS Directive. The series offers strong safety assurance for [medical and dental applications](#) in regulated healthcare markets.

Colorability for enhanced aesthetics and functionality

THERMOLAST® H Series is colorable, enabling customized visual features, identification systems, and aesthetic options for healthcare and dental applications, in keeping with the growing trend toward more personalized and advanced oral protection devices. Its processing versatility allows efficient

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production of functional and design elements, seals, flexible connections, mouthpieces, and closures.

Sustainability from the get-go

At KRAIBURG TPE, [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: Advanced thermoplastic elastomers play an increasingly important role in enabling orthodontic manufacturers to develop products that are more comfortable, durable, hygienic, and aesthetically refined. Whether it's [metered-dose nasal spray bottles](#) or [otoscope](#), KRAIBURG TPE continues to support innovation in modern medical and dental applications.

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

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(Photo: © 2026 KRAIBURG TPE)

For high-resolution photography, please contact Bridget Ngang
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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 718 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.