KRAIBURG TPE expands its solutions for testing and validating new compounds

**Significant materials data from injection to surface qualities and adhesion**

**KRAIBURG TPE has implemented a new system at the production facilities at its main site in Waldkraiburg, Bavaria. It enables quick changeover between temperature-controlled tooling inserts in injection molding processes in order to gain precise data on the fluidity, surface quality, and adhesion of specific material compounds. This makes fulfilling customer requirements more efficient.**

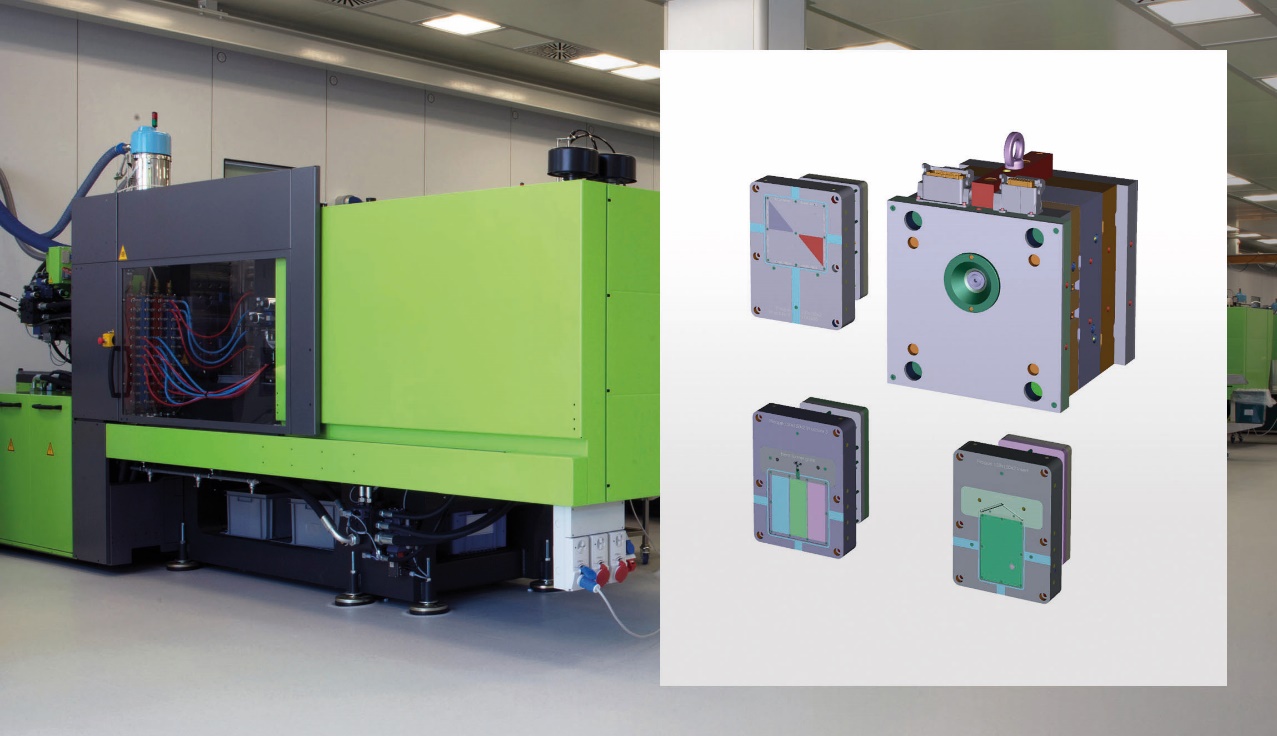
As demand for materials is increasing constantly, there is a need for continual development and innovation in materials and testing. We have learned through experience that a standard test plate is of limited use when validating materials. Aspects like fluidity and surface quality are also important in addition to mechanics. In order to cater for these situations and to satisfy customer requirements, KRAIBURG TPE decided to provide different bonding options for each product design. Tools are attached to a new injection molding machine with a locking force of 1,100 kN. They are primarily used for internal Thermoplastic Elastomer (TPE) testing and for preparing test and sample plates of commercial or customer-specified TPE compounds for specialist material testing.

Intelligent sensor technology delivers reproducible data. This information improves the analysis of the injection qualities of the compounds when used in various gating systems. Various surfaces can also be created and analyzed through the use of different tooling inserts. EPDM bonding can also be evaluated according to Guideline 2701 of the Trade Association for the German Rubber Industry (WDK) which was adopted in 2019. This enables both the internal and external requirements of the material to be mapped. Areas that can benefit from this:

* Surface structures for vehicle interiors
* Evaluating the demolding properties of super soft compounds
* Determining the actual cavity pressure

"The clear advantage of this tool design is its flexibility when investigating significant material data," says Dipl. Ing. (FH) Grit Müller from the Application Engineering Team at KRAIBURG TPE. "This enables new TPE compounds to be examined more accurately."

The system and interchangeable inserts were developed and created in collaboration with Konstruktionsbüro Hein ([www.kb-hein.de](http://www.kb-hein.de)) and Monz Werkzeugbau ([www.werkzeugbau.com](http://www.werkzeugbau.com/)). It was a challenge to integrate the various gating systems with the shortest possible set-up times. The inserts are designed for the production of application-specific sample plates. The design is flexible and can also be adapted to fulfill new requirements in future.



**Image:** A new system at the main production site of KRAIBURG TPE enables quick changeover between temperature-controlled tooling inserts in injection molding processes in order to gain precise data on the fluidity, surface quality, and adhesion of specific material compounds. (© KRAIBURG TPE)

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**About KRAIBURG TPE**

KRAIBURG TPE ([www.kraiburg-tpe.com](http://www.kraiburg-tpe.com)) is a global manufacturer of thermoplastic elastomers. From its very beginnings in 2001 as a subsidiary of the historical KRAIBURG Group founded in 1947, KRAIBURG TPE has played a pioneering role. With production sites in Germany, the U.S., and Malaysia, the company offers a broad range of compounds for applications in the automotive, industrial, consumer, and strictly regulated medical sectors. The established THERMOLAST®, COPEC®, HIPEX®, and For Tec E® product lines are processed using injection molding or extrusion and provide numerous processing and product design advantages to manufacturers. KRAIBURG TPE features innovative capabilities as well as a truely global customer orientation, customized product solutions and reliable service. The company is certified to ISO 50001 at its headquarters in Germany and holds ISO 9001 and ISO 14001 certifications at all global sites. In 2021, KRAIBURG TPE, with over 682 employees worldwide, generated sales amounting to 216 million euros.