

## TPE shortens cycle time in the production of logo plates on engine covers

Mues Products & Moulds GmbH, based in Kolbermoor near Rosenheim, Germany, has put on the market a new type of logo plates for automotive engine covers. Cooperation partner for the development was Kraiburg TPE. The TPE compounder based in Waldkraiburg supplied the material for the soft component of the part. Hipex allows the production of the part in a 2K injection moulding process. Compared to a manual assembly of the hard and the soft component, this shortens the cycle time significantly and reduces the error rate.

The TPE bearings on the logo plate are important as they make it possible to put the part on the engine cover and remove it again. In cooperation with Kraiburg TPE Mues has developed a method to produce the logo plate including the TPE component in one manufacturing process only and at the same time to improve the properties of the part. This was made possible through the application of the temperature and media resistant Hipex compound.

„The decisive factor for me was that Hipex can withstand constantly high temperatures up to 150 °C as well as the contact with gear oil, lubricants and transmission fluids“, says Markus Seidl, CEO of Mues Products & Moulds.

A challenge in the development phase was the construction of the anchorage of the soft TPE component on the hard component, a polyamide. A ring in the hard component has been provided with slots and teeth which are completely overmoulded and penetrated by the TPE. Thereby the TPE is mechanically anchored with the hard component and furthermore formed by means of an elaborate undercut construction: The cavity is more voluminous in the lower area and therefore the rubber bearing builds a narrower part in the upper area, which allows to put on the logo plate on the engine cover similar to a press stud. Despite the undercut, demoulding does not cause problems thanks to the firm mechanical anchoring of the TPE component and the high flexibility of the material. The 2K injection moulding process increases the production quality and at the same time considerably reduces the cycle time, the error rate as well as the manufacturing costs.

### About Mues

Mues Products & Moulds GmbH is specialised in the production of complex injection moulds for plastic parts. Since more than 40 years, moulds weighing up to 15 tonnes have been produced. The portfolio also includes 2K and gas-assisted techniques as well as film insert molding (FIM). Difficult geometries are realised within a very short time through CAM programming and 5-axis simultaneous machining. Due to a growing demand for high-quality plastic parts, Mues also offers further processing steps such as infrared welding and pad printing in addition to sampling and serial production.

### Adresse:

<http://www.gupta-verlag.com/thermoplastic-elastomers/news/technology/11113/tpe-shortens-cycle-time-in-the-production-of-logo-pla>