Structural inserts made of BASF’s Ultramid®

Case Study

Sika Automotive has selected BASF’s Ultramid® A3WG10 CR to manufacture a bodywork insert for use in the Peugeot 308 sw. This plastic belongs to BASF’s class of special polyamides that have been optimized for high durability and strength. The elaborate mechanical characterization of these materials is integrated into BASF’s Integrative Simulation, thus making it possible to safely develop highly loaded parts directly on the computer. The structural insert installed on the tailgate hinge of the station wagon is a hybrid component consisting of a plastic skeleton, two metal tabs and the structural foam SikaReinforcer®, which joins the system to the bodywork. This insert serves to reinforce the structure and it has to absorb the exerted forces as well as contribute to local stiffening.

Ultramid® A3WG10 CR is a chemical-resistant plastic reinforced with 50% glass fibers. In contrast to similar conventional PA66 types, it absorbs a great deal of energy, accounts for very high strength and stiffness, even at elevated temperatures, and is thus suitable for high dynamic loads. In this context, it has also been optimized with respect to its crash behavior.