

Bumper stiffener made of Ultramid® in four Opel models

Case Study

In the tracks of the Opel Corsa and the Opel Insignia, the Opel Astra has taken to the roads with a lower bumper stiffener (LBS) made of BASF's plastic Ultramid® CR. And even the Opel Meriva minivan has an LBS made of Ultramid®. The LBS is a component designed to satisfy the legislation regarding pedestrian protection and requires the use of high-performance materials. The polyamide has been optimized specifically for crash applications and already demonstrated its capabilities in various other vehicle components.

While the LBS in the Opel Corsa was something new in terms of pedestrian protection, the Opel Insignia was able to draw on previous experience, making it possible to design an especially lightweight and slim component to fit into the limited space available for installation. The skill of a development engineer is evidenced by being able to take both form and function into consideration simultaneously for each application. The completely different styling concepts of the Opel Astra and Opel Meriva compared to the one of the Opel Insignia result in different front end designs for each, so that none of the four LBS components is similar.

BASF developed all versions of the LBS via computer with the aid of its Ultrasim® simulation program.

