

NOMINEE



## LANXESS Corporation Skoda Octavia Front End Carrier

The component is a full-load carrying, all-thermoplastic, structural front end carrier with no additional metal reinforcements. The material used was Durethan® DP BKV 60 H2.0 EF, a highly reinforced polyamide 6 from LANXESS with 60% glass fibers. Features integrated into the carrier are the radiator and hood latch mounting points as well as the attachments for the headlamps, hood bumpers, anti-theft system and air ducts.



- The component is 25% lighter than a comparable all-plastic component that could meet the requirements using a 30% glass fiber reinforced polyamide material (this was considered the baseline design). The total weight savings were about 1.2 kgs (2.6 lbs).
- This is a full-load carrying, all-plastic design without additional metal reinforcements, the light weight of the component is made possible because Durethan® DP BKV 60 H2.0 EF polyamide has both excellent mechanical properties in relationship to the material density and good flow behavior, which allows for very thin walls. In fact, the wall thicknesses in areas subject to lower stresses could be reduced to just 1.8 millimeters.
- The special feature of this structural component is that it contains absolutely no sheet-metal reinforcements to manage the main latch load. This is innovative because all of the all-plastic front end carriers currently in production use at least some metal to reinforce the top cross-member in this area and transmit loads to structural points on the vehicle frame.
- The manufacturing process for this component is much simpler than some alternatives because it uses the standard injection molding process. It also has the advantage of producing the complete component in a single tool as a one-shot process, eliminating the need for additional injection molding or metal stamping tools.

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