Hot-side turbo duct by ABC Group made of Ultramid® Endure D5G3 BM

Case Study

BASF collaborated with the automotive supplier ABC Group, Canada, to develop the hot-side turbo duct for the 2017 Alfa Romeo Giulia. For this application, ABC Group decided on BASF's Ultramid® Endure . As heat under the hood increases, Ultramid® Endure with its high heat-aging resistance up to 220°C enables automakers to achieve engine downsizing and turbocharging without sacrificing performance. The Ultramid® Endure grades offer good processability, excellent weld line strength. For their turbo duct ABC Group used Ultramid® Endure D5G3 BM, a 15 percent glass fiber reinforced blow molding grade, which has a high hose strength and shows good swelling.

Furthermore ABC Group leveraged BASF's joining technology expertise to optimize the infrared (IR) welding parameters for this part, as it was crucial to achieve strong weld lines to ensure the long-term durability of the duct. After conducting numerous resin trials through molding and welding and rigorous validation testing, they managed to fine-tune the IR welding technology and assured the success of the welding process for this demanding high-temperature duct.