

Magneti Marelli develops air intake manifold with integrated charge air cooler made of Ultramid® Endure D3G7

Case Study

BASF worked with Magneti Marelli, a business of Fiat Chrysler Automobiles (FCA), to develop the air intake manifold with integrated charge air cooler for the 2017 Alfa Romeo Giulia. For this application they used Ultramid® Endure D3G7 by BASF, a 35 percent glass fiber injection molding grade. As the air intake manifold had to be able to withstand a continuous use temperature of 200°C this heat-resistant polyamide suited perfectly. It can achieve long-term service temperatures of 220°C and withstand peak temperatures of 240°C. The notable heat aging behavior results from an innovative stabilization system by BASF, which greatly reduces oxygen attack on the polymer surface.

Furthermore the material require an excellent burst pressure performance. Therefore Magneti Marelli needed a material that offered reliable weld strength at elevated temperatures. With BASF's design, material and processing expertise, Magneti Marelli could achieve the required burst strength and durability for the assembly.

