

Case Study

Air intake hose made of Durethan® BKV 315 Z



Air intake hose

Material: Durethan BKV 315 Z
Producer: Woco, Bad Soden, Germany

OEM: DaimlerChrysler
Industry: Automotive

The name Woco stands for innovative automotive engineering with a focus on vibration technology, acoustics and vehicle comfort. As a worldwide primary developer for the automotive industry, the company is a market leader.

In the area of engine acoustic systems, the air intake hose (see picture) was developed for DaimlerChrysler. It is used in the Mercedes Benz engine C 320 CDI to transport clean air from the air filter to the turbocharger.

This engine part has to meet demanding requirements, which is why Woco decided in favor of the LANXESS plastic Durethan BKV 315 Z. This grade of polyamide is a high viscosity, branched PA 6 with 15 % glass fibers. It has a significantly higher melt strength than comparable linear (unbranched) polyamides.

LANXESS formulated this polyamide grade – which allows complex components to be produced in large sizes – specifically for extrusion applications, such as extrusion blow molding. Its increased melt strength enables the customer to extrude tubes of the necessary length and weight. At the same time, it also improves the plastic's weldability in comparison to standard polyamides.

Additional benefits to point out are:

- Very good resistance to heat and hot air, even over long periods of time
- Easy to process, even by 3D blow molding
- High impact strength

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Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mold/die, the processing conditions and the coloring.

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