Case Study

Durethan® DP BKV 30 XF for Vorwerk vacuum cleaner

Chassis made of DP BKV 30 XF 011197

The light-colored component illustrated is the chassis of the Kobold VK 135 vacuum cleaner by Vorwerk Elektrowerke GmbH &Co. KG, Germany.

For several years the part was manufactured from Durethan BKV 30 (PA 6 GF 30). Following optimization this has now been changed to the easier flowing Durethan DP BKV 30 XF (PA 6 GF 30 Extreme Flow).

This chassis combines the motor, vacuum bag cavity, and guide rod. Vorwerk set out detailed specifications for developing a specially adapted material with better flowability for this component, which is subject to high mechanical stresses.

As a result, Durethan DP BKV 30 XF was developed whose flowability is over 60 % greater than standard PA 6 GF 30. This material fulfills the specifications without compromising the familiar high-quality properties of glass-fiber-reinforced polyamide.

The optimum performance of this innovative material is demonstrated by the specified mechanical properties, the filling behavior of the complex component, and the considerably lower stress on the mold.

The following material benefits were decisive in securing the switch to Durethan DP BKV 30 XF for this purpose:

- Considerable reduction of injection pressure
- Low distortion
- Reduced stress on the mold
- Reliable high-level mechanical properties
- Possible reduction in cycle time

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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 mould/die, the processing conditions and the coloring.

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