

Case Study

Vorwerk vacuum cleaners comply with Household Appliance Standard IEC/EN 60335-1



Mains connector for Vorwerk vacuum cleaners

Material: Durethan® DP BKV 30 Z FN50

OEM: Vorwerk Elektrowerke GmbH & Co. KG

Industry: Electrical/Electronics

The international **Vorwerk** group of companies is a family business with over 500,000 employees and sales partners in more than 60 countries. The company generated overall sales of 2.3 billion euros in 2006.

The commitment to high-quality products and the clear aim to provide families with quality goods direct to their door combined with a personal service are the values which lie at the heart of the Vorwerk group. These standards must also be met by each and every material supplier.

The recent tightening of the requirements of Household Appliance Standard IEC/EN 60335-1 made it necessary to develop new materials for the Kobold and Tiger vacuum cleaner ranges. LANXESS has worked alongside Vorwerk to develop a new product which satisfies the more stringent flammability requirements while also meeting the high demands

placed on the mechanical, rheological and visual properties.

The contact cavities of the Kobold and Tiger ranges are made from the newly-developed, flame-retardant Durethan® DP BKV 30 Z FN50. In accordance with the Household Appliance Standard, the material achieved a value of 750 °C in the glow wire temperature test for finished components (GWT). In the glow wire flammability index test performed on test specimens (GWFI), the material achieved a very good value of 800 °C as from a thickness of 1.5 mm. The flame retardant used is free of both halogen and red phosphorus.

Durethan® meets the high strength and viscosity requirements by using a special combination of 30 % glass fibers and an impact modifier. The product is also extremely free-flowing, which means that it is possible to achieve excellent surface quality.

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