

## Case study

### Barrel pumps made from Durethan® DP 1852/30



Figure 1 Barrel pump

FLUX-GERÄTE GMBH in Maulbronn, Germany, is a pioneer in the field of barrel pump technology. Over 50 years ago, FLUX became the first German company to manufacture barrel pumps patented to its own designs. Since then, FLUX-GERÄTE GMBH has become an internationally successful company with a high vertical range of manufacture and a workforce of 150 skilled employees. Its core skills lie in conveying, draining, circulating, mixing and metering liquids.

FLUX barrel pumps are used in almost all branches of industry and comply with the latest standards, including the recently tightened IEC 60335-1 domestic appliance standard.

**Material:** Durethan DP 1852/30  
**Manufacturer:** FLUX-GERÄTE GMBH  
**Industry:** Mechanical engineering

This standard places stringent requirements on the fire behavior of plastics used in components such as motor housings. It demands a GWIT (glow wire ignition temperature) value of at least 775 °C and a GWFI (glow wire flammability index) value of 850 °C. These high values can be achieved by using flame-retardant Durethan® DP 1852/30 polyamide from LANXESS. Glass-fiber reinforced PA 6 offers outstanding flame-retardance properties both in terms of ignitability and self extinguishing.

As a result, the suitability of Durethan® DP 1852/30 as an electrical insulating material has already been officially registered by the VDE. The material can now be used in all wall thicknesses and colors and in full compliance with the domestic appliance stan-

standard. This means that consumers and customers save both time and money on developing and testing new materials. What's more, from the very outset of a project, they know they can rely 100 percent on the plastic they are planning to use.

But it is not just the flame-retardant properties of Durethan® DP 1852/30 that make this plastic stand

out from the crowd – it also boasts a balanced mechanical and rheological profile. That's why it is also ideally suited for use as a housing material that can withstand impact stresses during daily usage. On top of all that, the polyamide also demonstrates outstanding resistance to precisely the types of chemicals that barrel pumps are inevitably exposed to.

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