

LANXESS expands range of high-modulus thermoplastics:

Two new highly reinforced polyamides

- **Ultra-thin wall thicknesses**
- **Excellent surface qualities**

Cologne – Polyamides and polybutylene terephthalates reinforced with a glass fiber content of 50 percent and more are ideal for applications in lightweight construction thanks to their strength and stiffness. They frequently are a lightweight and economical alternative to sheet molding compounds (SMC) and other reinforced thermosets, as well as to metals like steel, aluminum and die cast zinc. LANXESS therefore has been regularly adding new variations to its already wide range of injection molding materials in this segment. The latest examples are two new polyamide 6 grades.

Tailored for “ultra-thin-wall technology”

Durethan BKV 60 XF is an advancement of Durethan DP BKV 60 H2.0 EF, which already is established in mass production for articles such as lightweight front ends, spare wheel recesses and large transmission oil pans. The new product is also reinforced with 60 percent glass fibers, but with a comparably high-quality set of mechanical properties, it displays better melt flow by 30 percent. “That is especially the case for very thin-walled applications. With our high-tech plastic, processors can achieve wall thicknesses of one millimeter or less, meaning they can easily fabricate high load-bearing structural parts with thin ribbing,” explains Dr. Stefan Theiler, specialist for highly reinforced polyamides at LANXESS. The new polyamide results in smooth surfaces with virtually no protruding glass fibers. This excellent surface quality is based on an optimized crystallization process and higher injection rates, which are possible thanks to the high flowability of the melt. Another advantage of this engineering material – which also permits laser marking – is its improved resistance to thermal aging.

LANXESS AG

Contact:
Michael Fahrig
Corporate Communications
Spokesperson Trade & Technical
Press
50569 Köln
Germany

Phone: +49 221 8885-5041
Fax: +49 221 8885-4865
michael.fahrig@lanxess.com

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For example, the tensile stress at break of test samples was still above 200 MPa after over 3,000 hours of hot-air aging at 180 °C.

Perfectly suited for tablet PC back shells

The second material innovation is a polyamide 6 that is to be marketed under the name Durethan BG 60 X XF. It is reinforced with 60 percent of a special mixture of glass fibers and glass microspheres. Its stiffness and strength are similarly high to those of Durethan DP BKV 60 H2.0 EF. "The unique feature of this material is that its shrinkage is significantly more isotropic, and components therefore hardly tend to warp at all. We see major application opportunities in thin-walled, high-stiffness back shells for tablet PCs, but also in automotive interiors. Another contributing factor for these applications is the excellent surface qualities that can be achieved with this material," says Theiler. Initial manufacturing trials with mass production molds already have confirmed that the material can deliver these advantages.

LANXESS is a leading specialty chemicals company with sales of EUR 8.3 billion in 2013 and about 16,700 employees in 29 countries. The company is currently represented at 52 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of plastics, rubber, intermediates and specialty chemicals. LANXESS is a member of the leading sustainability indices Dow Jones Sustainability Index (DJSI World and DJSI Europe) and FTSE4Good.

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Information for editors:

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Contact: Michael Fahrig
Corporate Communications
Spokesperson Trade & Technical
Press
50569 Köln
Germany

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michael.fahrig@lanxess.com

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News Release

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Germany

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