

LANXESS at SKZ's Plastics in E&E Applications conference at Marienberg Fortress in Würzburg on May 30 and 31, 2017

New halogen-free, flame-retardant polyesters and polyamides in focus

- **Non-reinforced, flame-retardant PBT compound with high elongation at break**
- **High-modulus materials for mechanically stressed components**
- **Polyamides for thermal management**

Cologne – Specialty chemicals company LANXESS has its own stand at this year's Plastics in E&E Applications conference, hosted by the Süddeutsches Kunststoffzentrum (SKZ). Participants range from plastics manufacturers, household appliance producers and system suppliers to the automotive industry and testing/certification organizations. "We want to take advantage of this inter-industry event for the electrical/electronics industry to introduce our new, halogen-free, flame-retardant PBT compounds. Our exhibit also focuses on highly reinforced polyamide grades with and without a flame retardance package, and thermally conductive, electrically insulating polyamides," says Alexander Radeck, applications development expert in the High Performance Materials (HPM) business unit.

Alternative to PBTs containing halogen-based flame retardants

The halogen-free, flame-retardant PBT (polybutylene terephthalate) compounds in the Pocan BFN product line are a good alternative to their counterparts containing halogen-based flame retardants. For example, they display better electrical behavior and higher thermal and color stability. They pass the UL 94 standard fire tests of the U.S. testing organization Underwriters Laboratories, achieving the best classification of V-0 for a test specimen up to 0.4 millimeters thick. "Apart from product grades with a glass fiber content of 13 to 25

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Page 1 of 4

percent, we will also be showcasing a new, non-reinforced compound that boasts a high elongation at break of over seven percent despite the halogen-free, flame-retardant additives,” says Radeck. Another area of focus is material grades that display high glow wire resistance. In the glow wire ignition temperature test (GWIT) to IEC 60695-2-13, they achieve minimum values of 775 °C and therefore meet the requirements of standard IEC/EN 60335-1 for household appliances.

Highly reinforced polyamides

One innovation among the highly reinforced polyamide grades is the halogen-free, flame-retardant Durethan BKV 45 FN04. This free-flowing polyamide 6 with 45 percent-by-weight glass fiber content passes UL 94 V testing, achieving the best classification of V-0 (0.4 millimeters). The structural material is unusually stiff and strong. Its tensile modulus is 16 gigapascals (freshly molded). Further advantages include its high tracking and thermal aging resistance. “The material is predestined for use in structural components, for replacing thermosets and die cast metals, and for large connectors,” explains Radeck.

LANXESS also is presenting Durethan BKV 60 EF and XF, highly reinforced polyamide 6 grades with no flame retardant, suitable for highly mechanically stressed components. Despite their high glass fiber content of 60 percent by weight, they are just as free-flowing as standard polyamides with a significantly lower filler content. “We further are unveiling a compound reinforced with a 60 percent mix of short glass fibers and glass microbeads, intended for applications in which warpage is a critical factor.”

Thermally conductive and flame-retardant

Another topic at the LANXESS stand is the new line of Durethan TC (thermally conductive) polyamides for thermal management. “One highlight among these products is the new polyamide 6, Durethan TP

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723-620. This combines excellent light reflection and thermal conductivity with very good flame retardance based on a halogen-free, flame-retardant package,” explains Radeck. Potential applications include heat-dissipating components, such as heat sinks and LED modules.

LANXESS is a leading specialty chemicals company with sales of EUR 7.7 billion in 2016 and about 19,200 employees in 25 countries. The company is currently represented at 75 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics. Through ARLANXEO, the joint venture with Saudi Aramco, LANXESS is also a leading supplier of synthetic rubber. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World) and FTSE4Good.

Cologne, May 22, 2017
mfg/rei (2017-00045e)

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You can find further information concerning LANXESS chemistry in our WebMagazine at <http://webmagazine.lanxess.com>.

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Page 3 of 4

News Release

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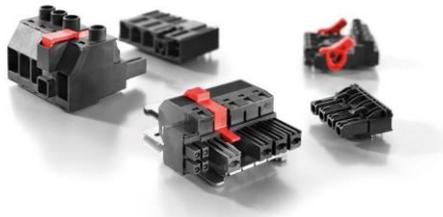
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Pictures



At the SKZ conference, LANXESS is presenting halogen-free, flame-retardant PBT compounds, highly reinforced polyamide grades with and without a flame retardance package and thermally conductive, electrically insulating polyamides. Photo: LANXESS AG

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Page 4 of 4