

LANXESS at Light + Building, March 13 – 18, 2016, Messe Frankfurt, Hall 4.0, Stand G 26

Thermoplastics tailored to LEDs

- **Team of light industry specialists set up**
- **Range now includes PCT compounds for LED chips**
- **New polyamide combines thermal conductivity with efficient flame retardance**

Cologne – LANXESS is making its first ever appearance at the Light + Building trade show in Frankfurt, where the specialty chemicals company will be showcasing its wide-ranging portfolio of new thermoplastic materials for LEDs (light-emitting diodes) and other lighting technology. “The LED market is enjoying strong growth and offers excellent scope for our products. In many cases, they represent an alternative to metals and expensive high-performance thermoplastics,” explains Thomas Malek, New Business Development Manager for lighting technology in LANXESS’s High Performance Materials business unit.

LANXESS’s comprehensive HiAnt services, which support manufacturers of LEDs and lighting systems worldwide at every stage of component development, are a further focal point of the company’s trade show presentation. “We’ve set up a dedicated team of technical and commercial experts for projects that quickly cater to customers’ specific needs,” continues Malek.

Focus on LED chips, housings and components with good thermal conductivity

The new materials for LEDs have been optimized in particular in terms of light reflection, temperature/light resistance, flowability, thermal conductivity and/or flame retardance. The focus is on three areas of application – LED chip carriers, housings/connectors and components that require good thermal conductivity. The Pocan

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compounds based on polycyclohexylenedimethylene terephthalate (PCT) – a new polyester class in the LANXESS range – are one example of a material innovation for LED chips. “Unlike high-temperature polyamides, the compounds maintain their high reflectivity when subjected to thermal stresses, because they barely age,” explains Malek.

New highly reflective materials based on polybutylene terephthalate (PBT) that benefit from halogen-free flame retardance have been developed for the housings of items such as downlights or spotlights. One particular feature of these materials is their excellent aging behavior under the effects of heat and light.

One material innovation for heat-dissipating components such as cooling elements is a polyamide 6 that combines excellent light reflection and thermal conductivity with very good flame retardance based on a halogen-free flame-retardant package.

LANXESS also offers a wide range of products for LED components that do not require a high level of reflection or good thermal conductivity. These include materials with excellent flow properties that also benefit from low distortion and shrinkage for intricate thin-walled components. Other items in the portfolio are extremely rigid high-strength polyamides and polyesters for components that are subject to high mechanical stresses, and impact-resistant materials for components that need to withstand high impact stresses.

HiAnt service ensures customer proximity

LANXESS’s customer service for the lighting industry includes plastic-tailored design of molded parts to offer a level of thermal conductivity. The company’s experts can simulate how, during the operation of a lamp or LED, the temperature in the component depends on its geometry and the material. A further service offering is the simulation of ball drop and spring hammer tests, which are widely used in the lighting industry, together with the corresponding

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tests on finished parts. As part of development projects, LANXESS provides partners with BRDF (bidirectional reflectance distribution function) data for its materials. As Malek explains, “the data are required for programs that can be used, for example, to simulate how lights and lamps illuminate a given space.”

LANXESS is a leading specialty chemicals company with sales of EUR 8.0 billion in 2014 and about 16,300 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 FTSE4Good.

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Forward-Looking Statements.

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Information for editors:

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

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