

LANXESS at the “Plastics in E&E Applications” SKZ conference in Würzburg, Germany, Marienberg Fortress on June 4 and 5, 2019

LANXESS offers economic alternatives to polyamide 66

- **Special HiAnt customer service for the electrical/electronics sector**
- **Wide range of halogen-free, flame-retardant compounds**

Cologne – Specialty chemicals company LANXESS will once again have its own stand at the “Fuse Box Meets Dryer – Plastics in E&E Applications” conference of the Süddeutsche Kunststoffzentrum. “In terms of topics, this year we are concentrating on cost-effective alternatives to polyamide 66 compounds, the application of our structural materials in the battery, powertrain and charging infrastructure of electric vehicles, and our growing range of halogen-free, flame-retardant polyamides and polybutylene terephthalates (PBT),” explains Marc Marbach, head of the E&E sales segment in the LANXESS High Performance Materials (HPM) business unit. Marbach: “We also want to showcase the extensive services that are customized specifically to the needs of the electrical and electronics sector and with which we support partners throughout the entire development chain for components.”

New halogen-free polyamides with stable orange coloring

The wide range of halogen-free flame-retardant polyamide 6, polyamide 66 and PBT compounds comprises both unreinforced material variants and those featuring up to 45 percent by weight glass-fiber reinforcement. For example, these include polyamide 6 compounds with high tracking resistance and high glow-wire resistance on the finished part, which are very well suited to applications in unsupervised operated household appliances, and metal- and halide-free product types for components such as high-voltage connectors near the car battery and the electric powertrain

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that must not corrode over the long term. All products are free of red phosphorous and can therefore be colored in light shades. Marbach: “We have now developed formulations with high thermal stability, with which polyamide 6 types, such as Durethan BKV30FN04, can be dyed in an orange shade, as per RAL 2003.” The orange color in particular increasingly plays an important role in labeling electric and electronic high-voltage components with respect to safety and function.

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Halogen-free and high laser transparency

In addition to the automotive industry, laser transmission welding is increasingly establishing itself in the electrical and electronics sector in series production of complex plastic components. HPM has thus expanded its portfolio to include halogen-free flame-retardant, glass-fiber reinforced polyamide 6 and polyamide 66 compounds, which are also laser transparent, to meet increased demand for such specialties. “The compounds are equipped with new, thermally stabilized flame-retardance packages that ensure that hardly any deposits are left in the tool during processing,” says Marbach. Polyamide 66 Durethan AKV30FN04LT is one example of these materials, which, in addition to a high level of laser transparency, has a high tracking resistance.

Halogen-free flame-retardant polyamide 6 and PBT as an attractive alternative to flame-retardant polyamide 66

The shortage in raw material capacities has led to supply-bottlenecks and major price increases for polyamide 66 compounds. This also applies to flame-retardant materials, which contain red phosphorous as a flame retardant. Many producers in the automotive industry and electronics sector are now looking for opportunities for substitution. HPM has numerous polyamide 6 and PBT compounds that, in many cases, can be used as cost-effective alternatives and are technically on par. “We have put together a team to help customers across industries to find alternative materials,” explains Tim Albert, head of

the international team. Potential substitutions arise, for example, in connectors, housing parts, line circuit breakers and visible components of household appliances. For instance, the unreinforced, halogen-free, flame-retardant PBT Pocan BFN2502, with its high tracking resistance and high strain at break, is suitable for connectors, some of which are currently still made using polyamide 66.

Great potential for use in batteries for electric vehicles

LANXESS has tailored polyamides and PBT compounds for components in the lithium-ion battery, the electric powertrain and the charging infrastructure of electric vehicles. They offer numerous advantages in terms of cost reduction, lightweight design, functional integration, flame-retardant properties and heat conduction. Potential applications include module covers and cover plates, high-voltage connectors, housing parts for control units, cell holders and media pipes. One example of these materials is the easy-flowing high-modulus polyamide 6 Durethan BKV45FN04, featuring 45 percent by weight glass-fiber reinforcement. Thanks to its halogen-free flame-retardant package, it passes the UL 94 flammability test with the best classification of V-0 (0.4 millimeters).

HiAnt – Custom services for the E&E sector

The E&E-specific services with which HPM supports customers include, for example, the standards-compliant performance of important flame-retardance tests, tool filling analyses and the plastic compatible design of heat-dissipating components using a simulation tool that takes factors such as component geometry, installation situation, heat input, and air convection around a component into account.

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News Release

LANXESS is a leading specialty chemicals company with sales of EUR 7.2 billion in 2018. The company currently has about 15,500 employees in 33 countries and is represented at 60 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World and Europe) and FTSE4Good.

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

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Image



OMNIMATE Power connector from Weidmüller Interface GmbH & Co. KG. At the SKZ conference, LANXESS will focus on cost-effective alternatives to polyamide 66 compounds and its growing range of halogen-free flame-retardant polyamide and PBT compounds, among other things.

Photo: Weidmüller Interface GmbH & Co. KG

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