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News Release

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New color-stable polyamide for electromobility

- **Portfolio expansion of color-stable tailor-made engineering plastics for use in electric cars**
- **Ultramid® A3U44G6 DC OR – the new flame-retardant PA66 type shines in bright orange**

With Ultramid® A3U44G6 DC OR (PA66 - GF30 FR), BASF is expanding its portfolio of flame-retardant engineering plastics for the eMobility market. High technical requirements from the industry require innovative solutions based on PA66. In the case of already proven Ultradur® (PBT) products, color stability can be largely guaranteed, especially in orange (RAL 2003) which is in high demand in the industry. Conventional polyamides, however, tend to strong color fluctuations or yellowing during heat aging.

"High-voltage components are usually exposed to significant temperature fluctuations. This repeatedly leads to strong discoloration in conventional polyamides. Our newly developed type Ultramid® A3U44G6 DC OR closes the innovation gap in terms of color stability and mechanical strength", explains Tina Weller, Product Development BASF. For the first time, the new grade meets all the criteria of color stability and heat aging resistance and thus also enables long-lasting color coding, which is safety-relevant in the sensitive area of high voltages. The color stability could be confirmed after 1.000h at up to 130°C in the test.

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Strong electrical insulation and flame retardancy

In addition to the color consistency, Ultramid® A3U44G6 DC OR with a CTI 600 is characterized by high electrical insulation. The use of tailor-made pigments while at the same time dispensing with halide-containing flame retardants also counteracts electrocorrosion, which was previously difficult to contain, especially in humid and warm environments.

"During development, we focused on the elimination of halides such as iodide and bromide, thus setting the course for a durable product without contact corrosion," explains Michael Roth, Product Development BASF.

With a very low total halide content (less than 50ppm), the PA66 achieves fire protection class UL94 V0 at 0.4mm. Furthermore, the product is equipped with a special organic heat stabilization package to meet the technical market requirements.

Further information:

http://www.emobility-plastics.basf.com/

www.ultramid.basf.com www.ultradur.basf.com

About BASF's Performance Materials division

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