

News Release

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The new star among the standards – the heat-stabilized Ultramid®

- **Innovative heat stabilization convinces with heat resistance up to 190 °C degree in demanding environments**
- **PA6 GF30 meets requirements for use in hybrid and electric powertrains and is now commercially available**

The automobile has always been subject to permanent change and facing ever new challenges. Legal requirements for pollutant emissions, downsizing of internal combustion engines, alternative powertrains such as electric, hybrid or fuel cell have accelerated further development rapidly. These changes lead to increasing demands as well as new technical boundary conditions on products in use. Glass fiber reinforced plastics, such as BASF's Ultramid®, make a significant contribution to further development. Engineering plastics must not only withstand high temperatures over a long period of time, but also prevent galvanic corrosion of electrical components.

New stabilization protects against galvanic corrosion

Heat resistance, good long-term use properties and weld resistance are the basic prerequisites for components in current and future powertrains. Whether in the internal combustion engine as well as in the hybrid or electric vehicle, reliable and technically flawless materials are indispensable in a demanding environment. With the new development of the heat-stabilized Ultramid® B3PG6 BK23238, BASF is expanding its product portfolio of polyamides for the high-temperature range. The

new P-stabilization offers a unique heat resistance of up to 190 °C and prevents galvanic corrosion on electrical components due to its halogenide- and metal-free stabilization (halogenide content: <50ppm). The polyamide, reinforced with 30% glass fibers, also impresses with excellent thermal aging performance, as well as vibration and hot gas welding properties.

Versatile use thanks to innovative P-stabilization

"Some customers were looking for a PA6 standard material that meets temperature requirements of up to 190°C. In addition, metal-free heat stabilization is requested more often in order to protect sensitive electronic components in various powertrain technologies from galvanic corrosion and thus to avoid possible failures," explains Andreas Stockheim, Segment Marketing Manager Powertrain and Chassis in BASF's Performance Materials division. "The developed material with the innovative P-stabilization can not only be used in conventional environments, but is also suitable for electronic applications, such as in electric vehicles."

During the development of the new material with a focus on components in the charge air duct, the versatility of the glass fiber reinforced Ultramid® was analyzed. For the first time, high temperature requirements were realized by the new heat stabilization. The best conditions for use in electric powertrains. With the Ultramid® B3PG6 BK23238, BASF is adding another product grade to its versatile portfolio of glass fiber reinforced and heat resistant polyamides.

"Where high temperatures and versatile material properties are required, the new Ultramid® can be used. The material convinces with significantly improved aging properties than existing PA6 GF30 systems, which are currently available on the market. Due to the versatile, cross-industry application possibilities, we can provide large production volumes at economically attractive conditions," adds Andreas Stockheim.

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About BASF

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