

News Release

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For even more metal replacement: one T for 1000 tasks

- **Extension of PPA portfolio by Ultramid® Advanced T1000 (PA 6T/6I)**
- **Particularly suitable for components in challenging environments, at higher temperatures and in contact with chemicals and humidity**

After the market launch of Ultramid® Advanced N, BASF is now introducing another polyphthalamide (PPA) at the Fakuma trade fair in Germany: Ultramid® Advanced T1000 – a new group of compounds based on polyamide 6T/6I. Within the Ultramid® family, Ultramid® Advanced T1000 is the product group with the highest strength and stiffness and with stable mechanical properties at temperatures of up to 120°C (dry) and up to 80°C (conditioned). Due to its partially aromatic chemical structure, it offers high resistance to humidity and to aggressive media – outperforming conventional polyamides and many other PPA materials on the market. This outstanding property profile combined with BASF's many years of application experience and established technical expertise makes Ultramid® Advanced T1000 a strong and stable material that is suitable for use in a wide range of challenging environments across all industries. Such applications can be found for example in the automotive industry, especially in areas where materials have to remain strong, no matter what temperatures or climates they are exposed to, and in all other industries where resistance to humidity or chemicals is required.

“New materials for metal replacement are the key to developing the next generation of lightweight, high-performance components,” says Abdullah Shaikh, head of the global PPA team. “The demands on the materials have increased drastically in recent years, mostly because of trends such as ongoing miniaturization, higher efficiency targets, and functional integration. BASF is now expanding its PPA portfolio, thus providing customers with the right plastics to enable them to meet these technical challenges.”

For sophisticated technical parts in many industries

With these properties, Ultramid® Advanced T1000 can be applied in many technical parts with a challenging requirement profile: in thermostat housings and water pumps, in fuel circuits and selective catalytic reduction systems, for actuators and clutch parts in cars as well as in coffee machines, as furniture fittings, and in construction applications such as water distributors, heating systems and pumps – in other words, anywhere where high, constant stiffness and strength across a broad temperature range from -40°C to over 80°C (conditioned) are necessary. The new PPA also shows higher resistance to chemicals than conventional aliphatic polyamides in contact with many demanding media, including hot coolants, oils, aggressive fuels, and solutions of road salts containing calcium or zinc salts. It is characterized by a lower water uptake than many aliphatic polyamides: this results in high dimensional stability and in stable physical and mechanical properties of the components – also in the presence of humidity. Ultramid® Advanced T1000 is suitable for processing by injection molding. There are different possibilities for post-processing such as laser marking or welding with Ultramid® Advanced T1000 grades, other polyamides or polyphthalamides.

Versatile portfolio

For a broad application range, BASF offers a versatile range of T1000 compounds. The initial portfolio consists of heat-stabilized, glass fiber-reinforced standard grades with reinforcement levels ranging from 30 to 60% for different stiffness, strength and toughness values; glass fiber-reinforced special grades with improved hydrolysis resistance with 35 or 45% glass fiber reinforcement, and a special long glass fiber-reinforced, highly heat-stabilized compound for outstanding mechanical performance, especially at higher temperatures. Depending on the requirements of individual applications, grades with different heat stabilizers are also available.

For more information: www.ultramid-advanced-T1000.basf.com

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About BASF

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