

News Release

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CHINAPLAS 2019: New polyphthalamide from BASF enables high temperature resistant components for automotive and electronics industries

- **Further extension of polyphthalamide portfolio by Ultramid® Advanced T2000 (PA 6T/66)**
- **Particularly suitable for flame-retardant connectors in electrical and electronic devices**
- **Global launch at CHINAPLAS, Guangzhou, May 21 to 24, BASF booth 11.2A41**

Guangzhou, China – May 13, 2019 – BASF is further extending its polyphthalamide (PPA) portfolio: At CHINAPLAS 2019, Guangzhou, the new PPA Ultramid® Advanced T2000 will be introduced to the market. The compound group based on PA 6T/66 combines excellent mechanical with dielectric strength at high temperatures - a combination which is particularly needed for connectors in the electrical and electronics (E&E) industry. Due to its partially aromatic chemical structure, Ultramid® Advanced T2000 is the ideal solution for parts that require high, constant stiffness and strength over a broad temperature range in combination with resistance to heat and humidity as well as optional flame-retardant (FR) properties. Such applications can be found in the E&E connector industry where high resistivity is required; and in the transportation industry where materials must remain strong in whatever temperatures or environments.

“In the E&E industry, the trend for further miniaturization drives the development of the next generation of high-performance parts, especially in the connector market”,

says Abdullah Shaikh, head of the global PPA team. “The challenges for these parts so far made of standard materials now lie in combining dielectric with mechanical strength, and this in very demanding conditions and on a performance level that standard plastics have not been able to reach so far. With Ultramid® Advanced T2000 we offer customers another PPA to choose the right plastic for the right part, especially to enable the latest E&E devices supported by our state-of-the-art FR competency.”

Broad application range in E&E and automotive industries

Thanks to its excellent mechanical and dielectric performance across a broad temperature range Ultramid® Advanced T2000 is the material of choice for a lot of new applications in the E&E and automotive industry: from delicate flame-retardant connectors via structural laptop parts to switches and miniature circuit breakers. With its high flowability in injection molding, Ultramid® Advanced T2000 enables thin-wall design and good surface quality. The new BASF PPA also enhances part integrity: structures do not melt easily in case of overheating by short circuit and they are resistant to external mechanical shock.

Furthermore, the glass-fiber reinforced grades offer the optimal combination of easy processing with high strength even at temperatures above the glass transition point. This makes them a versatile candidate for metal replacement of automotive parts such as water outlet valves, water pumps, fuel system components as well as actuators, transmission sensors and clutch parts – in other words, anywhere where superior strength, stiffness and resistivity over the complete range of application temperatures, both dry and in conditioned state are required. Ultramid® Advanced T2000 exhibits good resistance to all common automotive media such as coolants, fuels, oils and lubricants as well as to cleaners and road salts.

The new PPA shows improved impact strength on par with standard PA 66 and a lower water uptake than standard aliphatic polyamides resulting in high dimensional stability. Its high melting point (310 °C) and heat deflection temperatures of >280 °C (HDT-A) make it the ideal material for lead-free soldering without part deformation. Ultramid® Advanced T2000 can be efficiently processed: Its flowability is significantly higher than that of other high-temperature polyamides without compromising flexibility or toughness. Several post-processing methods like welding with other Ultramid® Advanced T2000 grades, polyamides or PPAs in general, as well as laser marking are possible.

Compound portfolio tailored for specific E&E requirements

For broad application possibilities, BASF developed a special range of flame-retardant grades reinforced with 30 % to 40 % glass fibers and with UL 94 V-0 rating available for all colors. In addition, there are several grades with reinforcement levels ranging from 30 % to 50 % glass fibers and improved impact resistance, available both as uncolored and laser-markable black. Depending on the requirements of individual applications, different heat stabilizers are available, too.

For more information: www.ultramid-advanced-t2000.basf.com

About BASF's Performance Materials division

BASF's Performance Materials division encompasses the entire materials' know-how of BASF regarding innovative, customized plastics under one roof. Globally active in four major industry sectors – transportation, construction, industrial applications and consumer goods – the division has a strong portfolio of products and services combined with a deep understanding of application-oriented system solutions. Key drivers of profitability and growth are our close collaboration with customers and a clear focus on solutions. Strong capabilities in R&D provide the basis to develop innovative products and applications. In 2018, the Performance Materials division achieved global sales of €7.65 bn. More information online: www.plastics.basf.com.

About BASF in Greater China

BASF has been a committed partner to Greater China since 1885. With larger production sites in Shanghai, Nanjing and Chongqing, BASF is a major foreign investor in the country's chemical industry, and operates the Innovation Campus Shanghai, a global and regional research and development hub. BASF posted sales of over €7.3 billion in 2018 to customers in Greater China, and employed 9,317 people as of the end of that year. For further information, please visit www.basf.com/cn/en

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The approximately 122,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of around €63 billion in 2018. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information at www.basf.com.