

# News Release

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## **New high-flow Ultramid® Advanced for thin-walled connectors enables higher power and data throughput in electronic applications**

- **Extremely low moisture uptake, excellent toughness and dimensional stability at high temperatures of new BASF polyphthalamide ensure stable performance during post-processing by surface mount technology**
- **Tailor-made, stable colored material for easy assembly and part identification**
- **Expanded testing facilities allow for high performance of products and quick response times**
- **Showcased on BASF booth at CHINAPLAS 2021**

BASF is now expanding its polyphthalamide (PPA) portfolio by a new Ultramid® Advanced N grade that is especially suited for connectors post-processed with surface mount technology (SMT). Ultramid® Advanced N2U40G7 shows the ideal balance of high flowability, toughness and flame retardancy. It thus enables miniaturization with thin-wall structures at high power and data throughput in electronic applications. Due to its low moisture uptake and high heat deflection temperature, the BASF PPA is especially suitable for SMT processes in electronics manufacturing as it prevents blistering or changes in dimensions of the processed part. BASF delivers the new PA 9T grade in tailor-made colors of high stability and supports with its proven flame-retardant expertise and material know-how for the SMT process. Because of its exceptional property profile, the new Ultramid®

Advanced N grade enhances the robustness, performance and reliability of power and data connectors in consumer electronics such as computers, laptops, servers, smart phones as well as smart household appliances and wearable devices.

"More data, less space – put in a nutshell, this is the major trend in consumer electronics. Smaller and thinner parts have to be incorporated into even more compact designs to save assembly space while at the same time the power and data flow rates increase", says Ivy Fang, head of business development Asia for PPA at BASF. "Thus, the requirements on materials used grow, especially with respect to temperature and mechanical properties. Our new Ultramid® Advanced is especially suited for such applications as it can withstand higher temperatures while maintaining its mechanical strength. It meets the heat distortion temperature above 260°C necessary for SMT which is often applied in electronics manufacturing today." The low moisture uptake of Ultramid® Advanced N2U40G7 guarantees a high dimensional stability and avoids blistering during the SMT process. In order to provide customers with the best-performing solution for high-precision applications using SMT, BASF has expanded its testing facilities by a simulation oven which imitates SMT processing circumstances.

The new application development service is complemented by BASF's competencies on flame-retardant materials and coloring of PPAs: The new high-flow material can be used to manufacture extremely thin-wall connectors, has a V-0 rating at 0.2mm (UL94) and satisfies JEDEC Level 1 blistering test standards. The material with a comparative tracking index (CTI) of 600 V also shows excellent insulating properties in presence of humidity and chemicals which leads to higher safety under harsh operating conditions. Ultramid® Advanced N2U40G7 can be supplied in tailor-made colors, e.g. orange, blue, white, yellow and black. This supports color correlation for safety reasons or component distinction often required in the E&E industry. The new PA 9T grade exhibits good color stability during post-processing with SMT compared to other benchmark materials in E&E applications.

### **About Ultramid® Advanced**

BASF's polyphthalamide portfolio is based on the four polymers Ultramid® Advanced N (PA9T), Ultramid® Advanced T1000 (PA6T/6I), Ultramid® Advanced T2000 (PA6T/66) and the long-standing Ultramid® T KR (PA6T/6). They open the door to the next generation of lightweight, high-performance plastic components in

many different sectors including the automotive industry, electronics and electric devices, mechanical engineering and consumer goods. The PPA portfolio is available globally and complemented by BASF's Ultrasil® simulation tool and extensive experience in application development. It includes more than 50 compounded grades for injection molding and extrusion, products with or without flame retardants. The compounds are available in different colors, from colorless to laser-markable black, with short-glass, long-glass or carbon fiber reinforcement, and with various heat stabilizers.

Further information: [www.ultramid-advanced-n.basf.com](http://www.ultramid-advanced-n.basf.com) and [www.ppa.basf.com](http://www.ppa.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 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 2020, the Performance Materials division achieved global sales of €5.63 billion. More information online: [www.plastics.basf.com](http://www.plastics.basf.com).

#### **About BASF**

About BASF At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 110,000 employees in the BASF Group contribute 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 €59 billion in 2020. 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](http://www.basf.com).