

News Release

P307/20e
Sept. 28th, 2020

New plastics set standards in flame retardancy and electrical insulation

- **Ultradur® B 4440 consistently continues the trend towards non halogen based flame retardants in unreinforced polyesters too**
- **Ultramid® B3U42G6 supplements BASF's comprehensive range of flame-retardant polyamides based on organic phosphorus compounds**

On the occasion of this year's International Trade Fair for Plastics Processing (Fakuma), BASF is showcasing on its virtual platform two new high-performance plastics, Ultradur® B 4440 and Ultramid® B3U42G6, adding innovations in the field of flame-retardant and highly insulating polymers to its existing portfolio.

The two new high-performance plastics offer extremely high tracking resistance and excellent fire behavior combined with economical processing options. These two new products successfully combine material innovation and sustainability by avoiding the use of antimony and halogen compounds.

"The new Ultramid® and Ultradur® grades mean that we are able to offer our partners from key industries solutions for the increasing regulatory requirements in the areas of electrical systems and fire protection," says Dr. Michael Roth, Product Developer at BASF Performance Materials. "The trend toward automation in production at our customers' plants also means that simple and stable manufacturing is essential. Ultradur® B 4440 and Ultramid® B3U42G6 make this possible," explains Roth.

Small components and contact spacing

Ultradur® B 4440 and Ultramid® B3U42G6 allow optimum insulation properties and flame retardancy for thin walls. Both high-performance plastics attain the highest CTI rating of 600 volts and the V0 classification according to UL94 as highly flame-retardant materials at wall thicknesses from 0.4 mm.

Both materials exhibit good suitability for injection molding. The unreinforced Ultradur® B 4440, which can also be processed by extrusion, lays the foundations for increasingly complex components, and helps designers meet growing demands. These two products open up the possibility for entirely new miniaturized solutions, e.g., for connectors, terminal blocks, loose buffer tubes for fiber optical cables and filaments. Since Ultradur® absorbs minimal moisture, it also provides high dimensional stability.

In practice, flame-retardant Ultramid® and Ultradur® products are found in the construction industry, classical electronic and electrical applications and e-mobility. In e-mobility, the focus is shifting towards applications within vehicles, such as high-voltage plugs, charging infrastructure and battery modules and housings.

An additional benefit is the use of bright colors to differentiate. “Orange is the new gray,” the expert Dr. Michael Roth explains. But other colors are also possible. “The color coding of individual parts makes for smoother and therefore faster production and assembly.” Precise laser marking is also possible through laser-sensitive coloring. The laser-transparent coloring options of Ultramid® extends the range of applications into housing assemblies.

“Besides the unreinforced Ultradur® B 4440 the currently developed glass fiber-reinforced Ultradur® products combine the high dimensional stability of polyester with distinctive high rigidity and toughness,” explains product developer Dr. Michael Roth. “This means that we can offer forward-looking materials for the electrical industry, construction and mobility sectors, combining technical progress with sustainability.”

Further information:

www.ultramid.basf.com

www.ultradur.basf.com



Fakuma 2020: We are going virtual!

Register now online at fakuma.basf.com to chat with our experts, to experience interactive lectures and to explore the latest highlights on our virtual platform.

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 2019, the Performance Materials division achieved global sales of €6.06 bn. More information online: www.plastics.basf.com.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 117,000 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 €59 billion in 2019. 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.