News Release

BASF develops first semi-transparent polyamide

October 10, 2017
P327/17e
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- **Ultramid® Vision enables parts that are transparent and highly resistant at the same time**
- **Balanced property profile for chemically challenging environments**
- **Possible usage in many industries for visual check, illumination and light design**

BASF has now succeeded in developing a semi-crystalline polyamide that allows light to pass through largely unhindered. Ultramid® Vision combines very high light transmission with low light scattering. This makes it the world's first semi-crystalline polyamide for semi-transparent or transparent components in chemically challenging environments. Moreover, the unique polyamide is UV and temperature resistant, scratch-proof as well as suitable for flame-retardant requirements. Ultramid® Vision can be used in various application fields: It recommends itself especially for parts for visual check, illumination or light design. Ultramid® Vision presents a versatile alternative to commonly used materials such as amorphous aliphatic polyamides, polycarbonate or styrene-acrylonitrile copolymers. The new polyamide is globally available for sampling from now on.

Visit us at Fakuma, Friedrichshafen, October 17-21, 2017, Hall B4, Stand 4306

Properties that are plain to see

Ultramid® Vision has physical and thermal properties which are similar to conventional unreinforced polyamide 6 compounds. However, it stands apart from these compounds significantly thanks to its exceptional visual properties. While semi-crystalline standard polyamides are nearly opaque, that is visually hazy, at a wall

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thickness of only one millimeter, one can see easily through parts made of Ultramid® Vision at wall thicknesses of up to several millimeters. Even if components made from Ultramid® Vision are exposed to elevated temperatures and moisture, the haze and transmission values hardly change compared to being freshly molded.

Ultramid® Vision offers a compelling choice compared to alternative transparent and semi-transparent materials thanks to its balanced property profile of good mechanics and processability together with high temperature, scratch and chemical resistance at an attractive price level. It has outstanding UV resistance and is also suitable for applications involving direct exposure to sunlight. The UV resistance was tested both for indoor use and under outdoor weathering conditions using conventional accelerated weathering tests. Ultramid® Vision also shows excellent stress cracking resistance to sun screen, cleaning agents and solvents as well as fats and oils.

For a sophisticated look in many industries

In addition to the uncolored base grade Ultramid® Vision B3K un, there is the option of producing specially equipped products featuring diffuse light scattering along with high transmittance. Customers can also obtain specially colored grades. Alternatively, Ultramid® Vision can be colored with polyamide-based color masterbatches which can be procured from e.g. BASF Color Solutions. In addition, the highly light-permeable Ultramid® Vision can be combined with other polyamide materials in a multi-component injection-molding process. This leads to easy production of multifunctional parts with transparent or illuminated sections.

Ultramid® Vision is particularly suitable for applications requiring a visual check, e.g. level indicators. The new polyamide can also be used for shockproof and chemically resistant covers for lighting elements. Further application areas include back-lit switches and buttons or diffusely scattering light covers in chemically aggressive environments. Because of the virtually unlimited scope for coloring Ultramid® Vision with low-migration and lightfast colorants, luminous color effects can be achieved that offer a wide range of design

possibilities for creating design objects or design features.

For more information, please visit www.ultramid-vision.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 2016, the Performance Materials division achieved global sales of €6.9 billion. More information online: **www.performance-materials.basf.com**.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The approximately 114,000 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 five segments: Chemicals, Performance Products, Functional Materials & Solutions, Agricultural Solutions and Oil & Gas. BASF generated sales of about €58 billion in 2016. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (BAS). Further information at **www.basf.com.**