

# News Release

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## **For the windows of the future: New Ultradur® grade improves the properties of PVC-window profiles.**

- **Engineering plastic with optimized melt temperature**
- **Excellent recycling solution for composites of PVC and Ultradur®**

Modern insulation is a key to effective climate protection, and this also applies to window profiles in new and renovated buildings. BASF has developed an Ultradur® (Ultradur® B4040 G11 HMG HP green 75074) that can be used for co-extrusion with PVC and is now available with a significantly improved property profile. With this new Ultradur® grade, PVC window profiles can be mechanically stiffened in the co-extrusion process. Compared with steel stiffening, the profile is lighter and can be produced at lower cost without compromising on stability and with improved insulation. Slimmer geometries are also potentially possible.

### **Improved material properties – higher efficiency**

The BASF Ultradur® plastic is put to use in numerous industrial applications for high-grade and heavy-duty technical components. This special development of an Ultradur® blend reinforced with 55 percent glass fibers benefits profile manufacturers and window manufacturers in numerous ways.

And the good news for all profilers: the melt temperature has been lowered again significantly, thus further simplifying the co-extrusion process with polymers such as PVC, as the melting point is very close to the processing temperature of PVC. “Our

new, improved Ultradur grade offers profile manufacturers and window producers clear-cut advantages in production. Our product and the manufacturing process are amenable to trouble-free integration into existing production lines,” says Dr. Kay Brockmüller, Project Manager Construction at BASF.

### **Ultradur® – reliable partner with high-level properties**

The newly developed material also exhibits the existing core properties. Ultradur® possesses high stiffness and binds with PVC. Suitably positioned, it can replace a conventional steel stiffener in the profile. The co-extruded profile is weldable and can be machined on existing equipment. For window makers, this reduces the production effort, as it eliminates all steel-related activities. In addition, handling is easier during production and installation in the building, because the profile reinforced with Ultradur® is much lighter. A further positive feature for the customer, in addition to improved insulation performance, is that the profile exhibits high dimensional stability when installed and shows virtually no post-shrinkage after installation.

At the international “FENSTERBAU FRONTALE” trade show from March 18 to 21, 2020, in Nuremberg, the systems provider profine group will present a profile (proStratoTec) suitable for passive houses using this technology, which is also suitable for colored profiles and window elements.

### **Fit for the future – recycling and new applications**

There are fixed recycling rates for PVC window profiles in many countries. Hybrid profiles of PVC and BASF’s new Ultradur® can be separated and recovered at standard recycling facilities. The window manufacturer profine is currently modifying its recycling facilities so that the two materials can be separated and concentrated and used in new profiles. In the future production waste and scrap from partnering window manufacturers can be reprocessed.

### **The multitalent – further fields of application**

New Ultradur® with its proven property profile is also attractive for other industries. Wherever extruded profiles need to be reinforced and a light, extremely rigid or high-insulation product is required, BASF’s technical plastic is the partner of choice. This is particularly important wherever elevated temperatures are involved.

### **Fast track to the ready-to-use die**

Greiner Extrusion Group in Austria, world-wide renowned supplier of extrusion lines, dies and complete systems for profile extrusion, already proved competence in manufacturing dies that process this improved product with the desired high fiber orientation, running reliability and extrusion speed.

### **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](http://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. 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 over €63 billion in 2018. BASF shares are traded on the stock exchange in Frankfurt (BAS), London (BFA) and Zurich (BAS). Further information at [www.basf.com](http://www.basf.com).