

News Release

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Lightweight and emission reduction – roof frames made with Ultradur® High Speed

- **Design allows weight reduction while improving production processes**
- **Material convinces with high flowability and temperature resistance**

The trend to panoramic roofs is ever increasing in the automotive industry. Car customers include panoramic roofs at the top of the list of extras when buying a new car. This trend coexists with the need to reduce the weight of all automotive components to minimize CO₂ emissions. With the development of new Engineering Plastic parts for its interior applications, BASF and Grupo Antolin are complying with these challenges. The newly developed panorama roof is integrated into the ceiling trim (called the headliner) of the car which is made from the very light Polyurethane Elastoflex® E 3943/134. The actual sunroof opening in the headliner is supported by a structural bracket. Traditionally this is made of heavy steel. With Ultradur® High Speed a metal replacement solution is now used. Besides a high dimensional stability, the Engineering Plastic convinces with excellent mechanical properties.

Partnership is the key to success

In close cooperation, both companies have successfully validated the Polybutylenterephthalate (PBT) Ultradur® High Speed in plastic frames for open panorama headliners. The novel and newly design of these parts allow a weight reduction up to 60% compared to other traditional solutions. This special material allows the injection of large parts with unique performance such as excellent

dimensional stability, low warpage at short cycle times, high stiffness, high temperature resistance and an outstanding flowability.

“One of the main advantages of the newly designed plastic parts is the change in the process. We attach the frame to the headliner. During the production process the panorama reinforcement frame is fixed to the interior trim part while at the same time the part is formed in the mould. That leads to the elimination of additional process steps and moreover it improves tolerances during assembly and the quality of the final part is increasing,” explains Enrique Fernandez from Grupo Antolin. “In addition, the new process does not involve the use of any solvents nor generate hazardous emissions.”

Global availability of Ultradur® High Speed

“The new rheological modified Ultradur® High Speed has an outstanding flowability that is crucial to obtain large and slim interior trim parts. Moreover, considering its unprecedented processing advantages, we have been able to reduce weight without losing stiffness and dimensional stability at high temperatures,” says Dirk Salzmann, Key Account Manager in the Performance Materials division at BASF.

Following the predevelopment with a German customer, the first pilot project was launched for a best-seller vehicle with outstanding results. More opportunities with this solution have been identified for several OEMs at global scale.

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About Grupo Antolin

Grupo Antolin is one of the largest manufacturers of vehicle components in the world and a global provider of technological solutions for the car interior. The company has about 150 factories in 26 countries with 27,000 employees and a sales volume of €3.9 billion in 2020. The company supplies the world's leading car manufacturers. Grupo Antolin offers products with high added value through four Business Units: Overheads, Cockpits&doors, Lighting&HMI, and Electronic Systems.

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 bn. More information online: 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.