

News Release

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The campervan of the future: BASF presents concept vehicle VisionVenture at K2019

- BASF's innovative materials and development expertise open up new dimensions in lightweight construction, independence, travel experience and design
- More than 20 high-performance plastics enable world's firsts such as a self-inflating pop-top roof or lightweight natural stone claddings

The VisionVenture, co-created by BASF and HYMER, is a near-production glimpse into the future of van life. Using the development expertise of the BASF Creation Center, a new class of van has been created that blazes a trail in lightweight construction, independence, travel experience and design. The vehicle celebrated its world premiere at the Caravan Salon in Düsseldorf, Germany, at the end of August. Now, BASF will present the VisionVenture at K2019 (Hall 5, Stand C21/D21) in Duesseldorf from October 16 to 23.

"Our products give the designers unprecedented new options and functionalities for the VisionVenture," explains Martin Jung, Head of Performance Materials at BASF. "The end result demonstrates the full diversity of our material competence – from inspiration to finished product."

More than 20 high-performance plastics and a new painting technology of BASF are used in the concept camper. These impress with a huge range of properties. For example, BASF and HYMER use various innovative lightweight materials and processes in the interior and exterior, providing greater comfort while also making the vehicle more robust. The VisionVenture also sets new benchmarks when it

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comes to design – for example by combining plastics with natural materials such as hemp and slate. Solutions for energy management, thermal insulation and electrical components, a tailored package of measures for preventing noises and vibrations, and more than 100 3D-printed components round off the vision of modern travel.

"HYMER is synonymous with premium quality, innovation and a sense of discovery. The VisionVenture developed in tandem with BASF perfectly captures these values. It already promises to give our customers an entirely new sense of freedom," explains Christian Bauer, Managing Director of HYMER GmbH & Co.KG.

A lightweight approach

The VisionVenture's self-inflating pop-top roof is a world first and one of the van's most striking features. It inflates in less than 60 seconds, creating more living space than ever before. The Elastollan® coating on the roof creates an outer wall that is resistant to water as well as wind and guarantees a peaceful night's sleep at a pleasant temperature. The cushions and mattresses in the VisionVenture will also remain pleasantly fresh and cool even on the hottest day. This is down to the temperature-regulating effect of the Elastocoat® C Spray Gel, which adheres effectively to all PU foams and can be applied to different mattress surfaces, at different places and in variable thicknesses.

Combining the use of natural stone in interior design with a lightweight approach has never been possible before. But this is about to change thanks to the development of Veneo Slate[®], manufactured using the compact, non-foamed polyurethane Elastocoat. This world innovation has an exceptionally lightweight thin coating of real slate and with adding just 1 millimeter it is a space-saving and flexible material. The Elastoflex[®] polyurethane foam offers similar properties. With a unique combination of natural materials and plastic, this equally lightweight material utilizes the structure of hemp fibers to produce cupboard doors and kitchen fronts. Like Veneo Slate, it can be applied to round and curved surfaces, eliminating the need for heavy alternatives like wood or chipboard.

BASF used a range of 3D printing techniques to realize more than 100 components for the interior and exterior of the VisionVenture, including wheel arch linings, bodywork parts, lampshades, handles, hooks and tablet-holders. Whether the components are large or small, hard or soft, carbon fiber-reinforced or transparent, untreated or painted, this digital production method is a fast and cost-efficient

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solution for individual parts and small batches. The 3D printed wheel arches and other components such as the sills and balcony of the VisionVenture are protected by the polyurea spray coating Elastocoat C, which gives lasting protection from stains, scratches or impact damage from stones.

Independent, sustainable and smart

True freedom relies on independence – which the VisionVenture enables with its smart use of materials for energy management, insulation and electric components.

For the first time, BASF has combined its two innovative high-performance insulating materials SLENTEX® and SLENTITE® in the VisionVenture. The solid panel material SLENTITE is used in refrigeration equipment, door panels, window frame profiles and sub-floors. It can be easily cut to size and also provides the required stability for use in off-road vehicles. The highly efficient, safe and space-saving properties of SLENTEX provide heat protection for the battery, engine compartment, oven and hob in the VisionVenture. The high-performance insulating material is very effective in preventing the spread of sparks or fire, thanks to its non-combustible properties. Another advantage: Both materials do not show any effects of aging during their service life.

BASF's semi-aromatic high-performance polyamides, known by the brand name Ultramid® Advanced, are particularly light and strong. The product group has exceptional rigid and solid properties, even when exposed to high temperatures. The polyamides also retain their mechanical stability, making them ideal for use in the engine or engine compartment. Ultramid Advanced T1000 and Ultramid Advanced N are additionally resistant to hydrolysis and there-fore the perfect choice for the pipework in the VisionVenture's kitchen and shower installations.

Strong accents – inside and out

The VisionVenture makes a strong design statement. A key contributor to the van's cozy feel is Haptex[®], a polyurethane system for imitation leather, which spans the entire interior. This material feels pleasantly soft and is available in a range of colors and textures. It is also extremely easy to clean and does not contain organic solvents. On top: Two pendant luminaires with diffusers made from the translucent material Ultramid Vision. As well as directing a focused light beam onto the table, the lights, which are hidden within the ceiling, also function as downlighters to brighten the entire interior. Ultramid Vision is scratch-proof and extremely resistant

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to chemicals.

The VisionVenture's outer coating is something else that is new. For functional reasons, camper-vans are usually cream or white to avoid overheating during the summer. With their gray-green VisionVenture, HYMER and BASF are demonstrating that, in future, personal choice can also apply to the paintwork. The paint is based on Chromacool temperature-management technology. Chromacool is available in a wide variety of colors; it reflects the sun's infrared light, thus reducing the build-up of heat in the vehicle body. This passive temperature management means that heating of the vehicle's surface is reduced by up to 20 °C, with the inside temperature dropping by as much as 4 °C. Less energy is needed for air conditioning, which helps to reduce fuel consumption, or to increase the range of electric vehicles.

Maximum comfort – on the road and at the beach

The VisionVenture means never having to sacrifice exceptional comfort. A full package of innovative BASF materials created by designers and engineers in completely new and surprising ways makes sure of it.

Infinergy[®], primarily associated with the Energy Boost running shoe from adidas, appears in jet black for the first time in the VisionVenture. In the steps and the bed frame, the expanded thermoplastic polyurethane (E-TPU) gives pressure point relief together with pleasing aesthetics. As a connection module, it holds the slats in the slatted base together, resulting in an excellent, individually adjustable mattress base on account of its high material resilience. This effect is also maintained in the event of a continuous load; this is known as "rebound."

To make traveling as relaxing as possible, the pillows and mattresses used in the VisionVenture are just as comfortable as those you would have at home. The memory effect of the CosyPUR® molded flexible foam ensures optimum comfort. The polyurethane material has special properties that can be set using cell morphology from ultra-soft to viscoelastic. The material is also air-permeable, breathable and machine-washable, and retains its properties even after long-term use.

Meanwhile, to avoid any compromises in comfort on the open road, BASF and HYMER have come up with a customized NVH (noise, vibration, harshness) package for the VisionVenture. The compact, microcellular polyurethane Cellasto®

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is used to reduce vibrations and block noise in the interior, drive or chassis. Specifically for off-road adventures, the developers have fitted the VisionVenture with a special Cellasto solution for vibration decoupling and structure support of the chassis, combining driving safety with dynamics and comfort.

To view our product infographic, please click <u>here</u>.

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 billion. 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. 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 around €63 billion in 2018. 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.