We create chemistry

News Release

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BASF at Simac
Go!Create your shoes with BASF materials

- **More energy@work: Light materials with high rebound**
- **For extreme conditions: Boots that remain soft at winter temperatures**
- **Win-win: High performance solutions are made sustainable**
- **Bubble shoe: Creativity in times of lockdown**
- **New dimension: Completely 3D printed high heels and climbing shoes**

From September 20 to 22, 2022, Simac, the international machinery and technology exhibition for shoes, will once again be opening its doors. This year BASF (hall 14 booth, F33/F37/G34/G38) will exhibit its wide range of new solutions for the shoe industry: a concept shoe made entirely out of BASF materials, boots which stay soft even at minus 40 degrees, light and high rebound soles for safety shoes and sustainable footwear solutions. On top BASF will present 3D printed shoes as well as coatings solutions to protect the soles.

From sports to safety shoes: low density, high elasticity

Light and high rebound are main requirements when it comes to the midsole of sports shoes. In this field BASF is one of the top suppliers of polyurethane (PU) materials. But what is valid for sports shoes should also be true for safety shoes. High rebound which guarantees soft dampening effects and lightweight soles are decisive for the comfort also of safety shoes. BASF transferred their knowledge from the sports sector to the safety shoe sector. The result are PU materials that safety

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producers waited for – it allows highest productivity by the direct soling process and comes with conformance to all safety norm requirements.

Winter boots made from PU stay soft even at minus degrees

Thanks to close cooperation with boots manufacturers, BASF further improved the performance of Elastopan® polyurethane systems for boots. The result is a PU system for winter boots that provides outstanding properties: highest thermal insulation, keeping the feet warm, and provides high comfort even at low temperatures until minus 40 degrees. That makes this Elastopan® perfect for boots to wear during your winter adventure or – if combined with a toe cap – even on an oil rig in Alaska.

BASF offers a broad portfolio of sustainable footwear solutions

BASF will present a concept shoe that is entirely made of sustainable products – the athleisure shoe ‘MADGAMMA - Intertekk Saturn’. The upper of the shoe is made with the 100% recyclable monofilament fiber Freeflex™ thermoplastic polyurethane (TPU). The replaceable midsole consists of the comfortable and biobased Elastopan® N polyurethane series. Another replaceable midsole option is made with TPU foaming, which has a lower density, high energy return, and is recyclable. Beside these products, other sustainable solutions such as the biomass balance approach and Ccycled Infinergy®, will be shown. BASF experts will be glad to discuss with you the right material for your environmental goals.

Footwear Design Content: In the lockdown we lived in bubbles, which now appear in award winning shoes

The creations from the last design contest of the school for design Calzaturiero Politecnico, Padua, Italy reminds us to the how we lived during Covid – like in bubbles. This feeling inspired the designers for the soles – the outsole is a transparent tread made of multiple bubbles. These bubbles enable us to look through to the midsole, which is bright and colorful. For the upper the students used recycled material from footwear and textile manufacturing scraps. The perfect combination between technology and craftsmanship can be found in the three winning shoes which are presented at Simac.

Less is more – the first in-mold coating with integrated demolding properties

Furthermore, BASF will present NovaCoat-D that combines in-mold coating and release coating in a new way. Besides its demold properties, the coating provides additional functionalities for soles such as protection against sunlight, scratches, and dirt. Thanks to its many years of expertise, BASF can offer a wide range of colors and effects. NovaCoat-D can be applied either manually or automatically.

3D Printing materials and solutions for the footwear industry

Forward AM, the brand of BASF 3D Printing Solutions GmbH, will present information at SIMAC 2022 on 3D printing materials and solutions for the complete design and development process of footwear. Along with samples of molds, lasts and soles, visitors can discover 3D printed climbing shoes made with the flexible Ultrasint® TPU01 powder. By leveraging the principles of design for Additive Manufacturing, the first individualized 3D printed climbing shoe came to life. This innovative technology not only simplifies the assembly of the shoe, but also reduces the production time required for customized footwear. Forward AM's flexible materials, such as Ultrasint® TPU01, are based on Elastollan® by BASF, which offers customers across industries broad cross-technology solutions.

More information: www.simac.basf.com

About BASF's Performance Materials division

BASF's Performance Materials division encompasses the entire material 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 2021, the Performance Materials division achieved global sales of €7.29 billion. More information: www.plastics.basf.com.

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About BASF 3D Printing Solutions

BASF 3D Printing Solutions GmbH, headquartered in Heidelberg, Germany, is a 100% subsidiary of BASF New Business GmbH. It focuses on establishing and expanding the business under the Forward AM brand with advanced materials, system solutions, components, and services in the field of 3D printing. BASF 3D Printing Solutions is organized into startup-like structures to serve customers

in the dynamic 3D printing market. It cooperates closely with the global research platforms and application technologies of various departments at BASF and with research institutes, universities, startups, and industrial partners. Potential customers are primarily companies that intend to use 3D printing for industrial manufacturing. Typical industries include automotive, aerospace and consumer goods. For further information please visit: www.forward-am.com.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. Around 111,000 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 comprises six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €78.6 billion in 2021. 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.