PRESS RELEASE

AsahiKASEI

Asahi Kasei Europe GmbH
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We make Future Mobility work – Asahi Kasei presents concept car AKXY™ and lightweight solutions at K 2019

Düsseldorf, October 14, 2019 – Lightweight materials to make future mobility work: From 16 to 23 October, Asahi Kasei will present engineering plastics and foam materials for the automotive industry at the K 2019, the world's biggest trade fair for plastics and rubber in Düsseldorf, Germany. One Highlight at the booth is the fully drivable electric concept car AKXY™ (Hall 8a, J15).

Lightweight materials will significantly add to the vehicle of the future. From the manufacturer's point of view lightweight materials are first and foremost a key factor to achieve the CO_2 fleet emission goals. At the same time, they contribute to a better range or fuel efficiency – without compromising safety. To reduce weight not only metals can be replaced, also existing plastic applications can be downsized and redesigned by using newly developed or improved thermoplastics.

The Japanese technology company Asahi Kasei will show its broad range of high-performance polymers and foam materials at K 2019. The company's concept car AKXY™ will be in the focus of this year's presentation, showing the broad range of automotive applications including synthetic rubber, electronics, fibers or coatings.

Besides AKXY™, Asahi Kasei will present the following materials:

TENAC™ Polyacetal (POM) – Can you smell the difference?

The in-cabin air quality is becoming increasingly important. With the increased use of plastics inside the car, the reduction of VOCs (volatile organic compounds) is becoming a key factor for an improved in-car air quality. VOCs are carbon-based gases that can evaporate from plastic materials into the air at room temperature, especially in newly produced cars. In closed environments, these substances can lead to discomfort and health issues, such as headaches or nausea.

Asahi Kasei, the world's only manufacturer of homo- and copolymer POM under the brand name TENAC™, developed a low-VOC material many years before the automotive industry started in-depth to address this issue. TENAC™ has the world's lowest VOC emission class – exceeding the high standards of all OEMs worldwide. In addition, properties like low friction, scratch resistance and a high mechanical strength make TENAC™ a suitable material for applications in the automotive interior.

It is already used in applications like sliders for seat adjustments, lumbar supports for seating comfort, or seat belt push buttons. The company has recently developed a metal-looking low-VOC TENAC™, using aluminum flakes as a filler. Looking and feeling like metal, it features a high scratch resistance while at the same time improving the in-car air quality compared to other materials.

Thermylene® Polypropylene (PP) – The economic alternative
Considering the concept of autonomous vehicles, panoramic roofs allow more light inside and offer excellent views of the surrounding to the passengers. Asahi Kasei's glass reinforced polypropylene Thermylene® features a high flowability and offers cost advantages compared to polyamide. Lighter and larger sunroof panels made of this material will add to the overall living-space experience of the future automotive.

LEONA™ Polyamide (PA) – Looks good, lasts long
With more sunlight inside the car, the necessity for UV-resistant materials will grow. Asahi Kasei's semi-aromatic glass-filled polyamide LEONA™ withstands the toughest automotive exterior UV tests – without any additional coating. It is used for exterior mirror brackets – and is now finding its way inside the car. It is already used for the fine thin-walled and unpainted blades of a dashboard venting system, directly positioned under the front windshield and with maximum sunlight exposure.

Polyamide Foam (under development) – The sound of silence
Sound insulation will become a key factor for the living-space experience inside the car. Ambient noise will need to be kept outside, while loud music should stay inside the car. Based on its expertise as one of only four fully integrated polyamide manufacturers Asahi Kasei is currently developing the world's first polyamide bead foam. Featuring the proven properties of polyamide – like high heat and chemical resistance – the special C- or macaroni shape of its beads also enable a significant noise reduction.

XYRON™ (mPPE) – For structural battery parts
Applications for XYRON™ are to be found to a large extent in the automotive sector. Thanks to its low density – the lowest among engineering plastics – mPPE (modified polyphenylene ether) is suitable for a wide range of lightweight components, that are used, for example, for relay blocks, hood panels and brackets. Concerning the current period of upheaval in the automotive sector, XYRON™ is especially used in the context of structural battery parts in the field of e-mobility. In this regard, the material contributes to a compact and weight saving battery design, at the same time leading to more efficiency as well as safety.

SunForce™ (mPPE particle foam) – For improved safety and efficiency
SunForce™ is a particle foam based on the engineering plastic m-PPE. Compared to standard foams made of polystyrene or polyolefin, the use of m-PPE equips this foamed material with unique properties, opening new doors for applications in thermal management and fire protection. The material is certified with UL 94 V-0 (Standard for Safety of Flammability of Plastic Materials for Parts in Devices and Appliances) fire protection class by the Underwriters Laboratories safety certification organization and thus contributes to an overall product safety. SunForce™ is the first-of-its-kind material certified with the UL94 V-0 standard. In addition to this outstanding flame retardancy, the material provides superior heat insulation properties while at the same time functions as a lightweight shock-absorbing material for automotive battery packs.

About the Asahi Kasei Corporation

Asahi Kasei Corporation is a globally active diversified technology company with operations in the Material, Homes, and Health Care business. The Material division encompasses fibers & textiles, petrochemicals, performance polymers, performance materials, consumables, battery separators, and electronic devices. The Homes division provides housing and construction materials to the Japanese market. The Health Care division includes pharmaceuticals, medical devices, and acute critical care devices and systems. With approximately 39,283 employees around the world, the Asahi Kasei Group serves customers in more than 100 countries and achieved sales of 17.6 billion euros (2,170.4 billion yen) in the fiscal year 2018 (April 1, 2018 – March 31, 2019).

Asahi Kasei is “Creating for Tomorrow” with all operations sharing a common mission of contributing to life and living for people around the world. For more information, visit www.asahi-kasei.co.jp/asahi/en/ and www.asahi-kasei.eu.

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