Press release

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WACKER presents silicone elastomers for power grids, e-mobility, sensors and lifestyle applications

- At a press conference, WACKER unveiled its product highlights for the K 2025 International Trade Fair for Plastics and Rubber in Duesseldorf, Germany
- Company will also display new booth design at the trade fair
- Portfolio will focus on new silicone products for energy, e-mobility digitalization and sustainability
- Highlights are ceramifying silicone rubber for e-mobility and electroactive silicone laminates for sensors, among others
- Live-production of mouthpieces for air up® water bottles with resource-saving silicone elastomers during K 2025

Munich / Duesseldorf – At a press conference hosted by Messe Düsseldorf today, WACKER presented its first product highlights for K 2025, the 23rd International Trade Fair for Plastics and Rubber coming up in October. In Hall 6 at Booth A10 – covering an area of 360 square meters and sporting WACKER's new booth design –, the Group will be showcasing innovations in the areas of grid expansion, e-mobility, sensors and lifestyle applications.

In the area of grid expansion, the focus is on addition-curing solid silicone rubber for the cost-effective production of hollow-core insulators. And in electromobility, a silicone product for busbars is celebrating its debut. It ceramifies in the event of fire, thereby protecting the traction battery in electric cars from short circuits.

Another highlight is silicone laminates, which WACKER recently began producing on a commercial scale. They are electroactive and can, for example, be used as

sensors in the field of digitalization. There is also news on the sustainability front. For example, a novel product from the ELASTOSIL® eco series. These silicones are produced using plant-based methanol and are therefore particularly resource-efficient. The product is hyperpure and requires no post-curing, thus making it suitable for use in lifestyle products and beverage bottles. During the trade fair, WACKER will be producing mouthpieces for air up® water bottles with the new liquid silicone rubber (daily during the trade show from 9:30 am to 6 pm).

“Silicones are true all-rounders. In addition to being easy to process, extremely robust and versatile, they have very good mechanical properties. For this reason, they are increasingly being used for applications that place high demands on the materials required. This is what makes technical innovations in important industries possible in the first place, for example in electromobility, medical technology or digitalization," said Martin Bortenschlager, Head of the Engineering Silicones Business Team, during the press conference attended by some 80 trade journalists.

Bortenschlager, an expert in silicones, cited the use of silicone products in energy transmission as an example. According to estimates by the European Commission, the refurbishment and expansion of energy networks in Europe will require investments of over 580 million euros. “As an insulation material, silicone plays an important and sustainable role in the safe operation of the energy grid. They insulate well, are resistant to both weathering and UV radiation and, unlike porcelain and glass insulators, do not normally need to be cleaned. They are therefore used in practically all areas of energy and transmission technology, especially in outdoor applications. “The demand here is immense and holds a huge market potential for us,” said Bortenschlager.

At the Trade Fair for Plastics and Rubber in October, WACKER will be presenting the following new products, among others:

POWERSIL® 1900 A/B

POWERSIL® 1900 A/B is a new high-consistency silicone rubber for the production of hollow-core insulators. The product is supplied as a 2K system and is suitable for manufacturing processes that involve spiral extrusion. In contrast to other production methods, this makes the manufacturing of even large-scale insulators with variable diameters easier and more cost-effective. Thanks to their comparatively low weight, hollow-core insulators are much easier to install than rod insulators with a solid core. Weight savings may add up to 80 percent.

ELASTOSIL® R 531/60

Busbars are basically aluminum or copper rails that distribute the current between the battery cells and modules. As nominal battery voltages in electric vehicles are already in the range of 300 V to 900 V, the reliable insulation of busbars is a must.

At K 2025, WACKER presents a new product that reliably insulates such components. ELASTOSIL® R 531/60 makes the sheathing of busbars cost-effective. In the event of fire, the product ceramifies and forms an electrically insulating protective layer that reliably prevents short circuits. ELASTOSIL® R 531/60 thus plays a vital role in passenger and fire safety of electric vehicles.

NEXIPAL® Sense

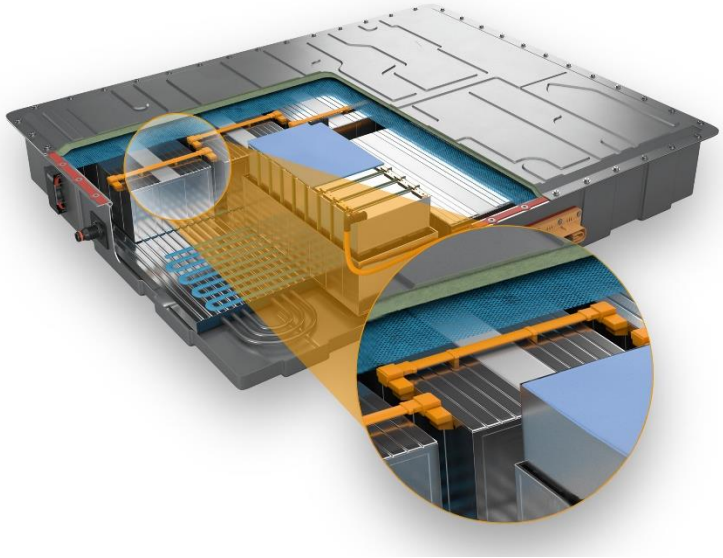
Silicone laminates take the production of flexible printed electronics to the next level. NEXIPAL® Sense laminates consist of highly stretchable silicone elastomers and electrically conductive silicone films that jointly work as a flexible and stretchable capacitor. Pressure or flex movements change the electrical capacitance of the component. Different voltage states thus provide precise sensor signals for applications in medical technology, robotics and sports. At the Group's production site near Burghausen, serial production of sensor laminates has started. WACKER will be presenting itself for the first time ever at this year's K 2025 trade fair as a manufacturer of prefabricated components that are produced using a specially developed and fully automated roll-to-roll manufacturing process. This will position the company as the world's first supplier of customized flexible sensor laminates on an industrial production scale.

ELASTOSIL®eco LR 5003

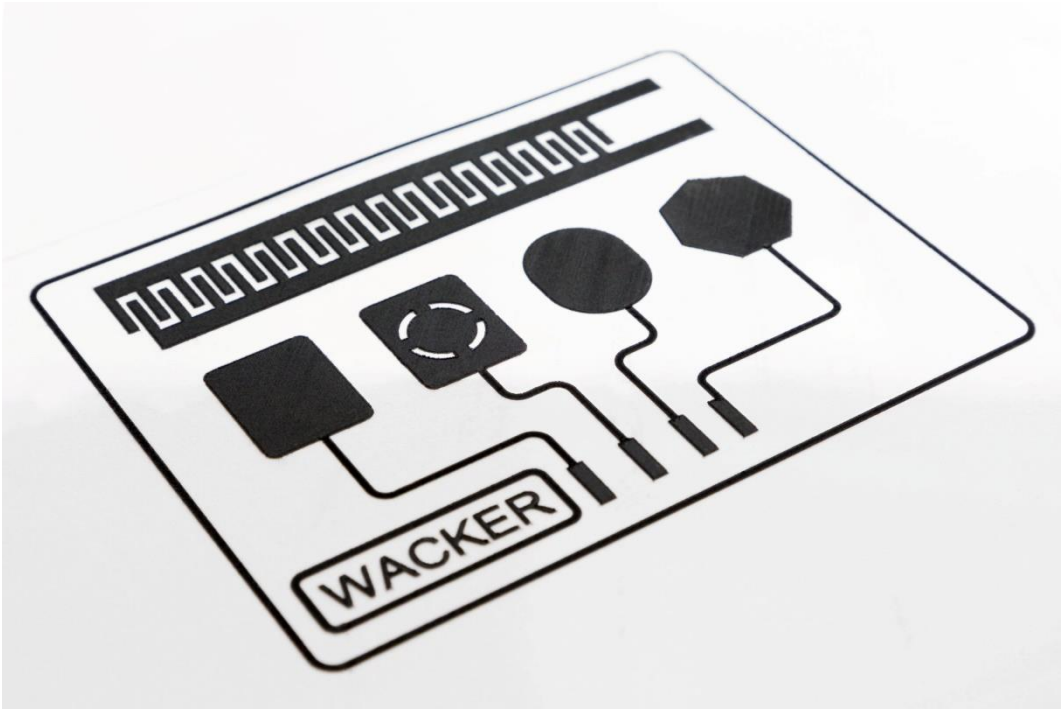
In its sustainability zone, WACKER will present its new "eco" grade ELASTOSIL® eco LR 5003. The non-postcure liquid silicone rubber is particularly suitable for the large-scale manufacture of products in the food industry and other sensitive areas. As far as their volatiles content is concerned, molded parts made from such silicones comply with the limits stipulated by the German Federal Institute for Risk Assessment (BfR) even without postcuring. They also meet the requirements of the U.S. Food and Drug Administration (FDA) for food-contact products. As a result, production of life-style products, drinking straws, baking tins, dough scrapers and other items is made very efficient. WACKER will use ELASTOSIL® LR 5003 to injection mold mouthpieces for trendy water bottles designed by the company air up® during the K show, using equipment by the courtesy of ARBURG and RICO Elastomere Projecting (live-demo daily from 9:30 am until 6:00 pm).

Visit WACKER at K 2025 from October 8 to 15, in Hall 6, Booth A10.

POWERSIL® 1900 A/B, WACKER's new high-consistency silicone rubber, facilitates the low-cost, high precision production of composite insulators via spiral extrusion processes. (photo: WACKER)



Interior view of a traction battery in an electric vehicle. The enlarged section shows the busbar (orange) insulated with ELASTOSIL® R 531/60. It is bent and fit into the battery architecture after sheathing. Thanks to its high elasticity and notch impact strength, the silicone can easily cope with this molding and bending process. (graphics: WACKER)



WACKER will be showcasing NEXIPAL® Sense at K 2025. Pressure or stretching movements of the electroactive silicone laminate generate different voltage states that provide precise sensor signals for applications in medical technology, robotics and sports. (photo WACKER)

At K 2025, WACKER will demonstrate live how ELASTOSIL® eco LR 5003 is used to manufacture the mouthpiece of air up®'s innovative water bottles. (photo: WACKER)

Please note: You can download these photos from
http://www.wacker.com/pressreleases

Additional information

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The company in brief:
WACKER is a global company with state-of-the-art specialty chemical products found in countless everyday items, ranging from tile adhesives to computer chips. The company has a global network of 27 production sites, 21 technical competence centers and 46 sales offices. With around 16,600 employees, WACKER generated annual sales of around €5.7 billion in fiscal 2024.

WACKER operates through four business divisions. The Silicones and Polymers chemical divisions supply products (silicones, polymeric binders) for the automotive, construction, chemical, consumer goods and medical technology industries. Biosolutions, the life sciences division, specializes in bioengineered products such as biopharmaceuticals and food additives. Polysilicon produces hyperpure polysilicon for the semiconductor and photovoltaic industries.

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