

PRESS RELEASE

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K 2022 International Trade Fair for Plastics and Rubber

WACKER Presents Self-Adhesive Liquid Silicone Rubber for Polycarbonate

Munich, July 29, 2022 – WACKER will be premiering its novel ELASTOSIL® LR 3078 product series at K 2022 International Trade Fair for Plastics and Rubber. These self-adhesive liquid silicone rubber grades cure extremely fast and establish a firm bond with the thermoplastic polycarbonate without the need to pretreat its surface. ELASTOSIL® LR 3078 was designed for two-component injection molding and enables cost-effective large-scale production of multicomponent parts, such as those needed in medical technology and the automotive industry. This year's K show will take place in Düsseldorf, Germany, from October 19 to 26.

With ELASTOSIL® LR 3078, WACKER is expanding its portfolio of self-adhesive liquid silicone rubber with a product line that adheres specifically to polycarbonate. The grades in this series are formulated in such a way that, as they cure, chemical adhesion builds up to the substrate, but not to the injection molding tool. To this end, WACKER uses a newly developed and patented self-adhesive technology that does not contain any bisphenol A structures. By

eliminating this substance class, the company increases occupational safety and contributes to consumer protection.

All grades of the new product line can be easily processed by two-component injection molding. They do not contain any substances that could result in solid deposits forming in the mold during processing. This ensures that the injection molding machine runs without interruptions.

Thanks to the fast curing of the new liquid silicone rubber grades, injection molding cycle times are very short. In addition, devices with complicated geometric shapes can be produced with high precision and without the need for secondary finishing. ELASTOSIL® LR 3078 thus opens the way for further miniaturization of polycarbonate-silicone hybrid parts and for completely new product designs.

The ELASTOSIL® LR 3078 product line comprises the hardness grades 20 to 70 Shore A and thus covers the entire hardness range that is important for the soft component of hybrid parts. All grades are translucent and can be colored as desired. The cured products are characterized by very good mechanical properties. They achieve a very low compression set. This is ideal for sealing applications. When relaxed after being compressed at high temperatures, a part molded with ELASTOSIL® LR 3078 will only show a small amount of deformation remains thanks to the material's elasticity. Sealing lips made of ELASTOSIL® LR 3078 therefore retain their function over the long term.

Cured ELASTOSIL® LR 3078 products have passed selected tests for biocompatibility according to ISO 10993 and US Pharmacopeia Chapter <88>, Class VI. They can also be steam-sterilized repeatedly at 134 degrees Celsius with no loss of mechanical properties or adhesion to polycarbonate. The new liquid silicones are therefore also suitable for manufacturing two-component parts for medical devices.

ELASTOSIL® LR 3078 can be used in all industrial sectors. Applications range from transparent covers as needed in motor vehicles, to housing covers for household appliances, to systems for medical diagnostics, automated drug delivery and minimally invasive diagnostic and surgical techniques.

Visit WACKER at K 2022 in Hall 6 at Booth A10.



Adhesion tests show that WACKER's new self-adhesive silicone rubber ELASTOSIL® LR 3078 adheres firmly to polycarbonate without pretreatment. (photo: WACKER)






The new self-adhesive silicone rubber ELASTOSIL® LR 3078 makes the manufacture of multicomponent devices, e.g. for respiratory masks, very efficient. (photo: WACKER)

Please note:

These photos are available for download at:
<http://www.wacker.com/pressreleases>

For further information, please contact:

Wacker Chemie AG
Media Relations & Information
Florian Degenhart
Phone +49 89 6279-1601
florian.degenhart@wacker.com
www.wacker.com
follow us on:   

The company in brief:

WACKER is a globally active chemical company with some 14,400 employees and annual sales of around €6.21 billion (2021). WACKER has a global network of 26 production sites, 23 technical competence centers and 52 sales offices.

WACKER SILICONES

Silicone fluids, emulsions, rubber grades and resins; silanes; pyrogenic silicas; thermoplastic silicone elastomers

WACKER POLYMERS

Polyvinyl acetates and vinyl acetate copolymers and terpolymers in the form of dispersible polymer powders, dispersions, solid resins and solutions

WACKER BIOSOLUTIONS

Biotech products such as cyclodextrins, cysteine and biologics, as well as fine chemicals and PVAc solid resins

WACKER POLYSILICON

Polysilicon for the semiconductor and photovoltaic industries