

PRESS RELEASE

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Fakuma 2017

WACKER Presents Non-Post Cure Liquid Silicone Rubber for Baby-Care, Food-Contact and Medical Applications

Munich, October 17, 2017 – At this year’s Fakuma international tradeshow for plastics processing, the Munich-based chemical group WACKER will be showcasing its new liquid silicone rubber line ELASTOSIL® LR 5040. These grades feature excellent mechanical properties after curing even without thermal post-treatment. They contain only few volatile components making the liquid silicone rubber (LSR) compliant with regulatory specifications governing sensitive applications in baby-care, food-contact and medical sectors. In many cases, processors do not need to post-cure the silicone elastomers after vulcanization. Fakuma takes place in Friedrichshafen, Germany, from October 17 to 21, 2017.

Silicone parts intended for use in the baby-care sector and the food industry in Europe must contain no more than 0.5 percent volatile substances. To ensure compliance with this limit, thermal post-treatment is often necessary. That entails heating the cured parts to temperatures of 200 degrees Celsius for several hours in a ventilated oven. This process step, which specialists also refer to as “post-curing”, accomplishes two things: it eliminates volatiles from the elastomer and improves its mechanical properties.

This laborious and expensive procedure will soon be obsolete. “We designed ELASTOSIL® LR 5040 in such a way that this silicone rubber already complies with current regulatory requirements governing applications in the baby-care sector and food industry in its non-post cured state”, says Christian Gimber, head of the Engineering Silicones business unit at WACKER. “Thus, in many cases, our customers can eliminate post-curing of silicone parts for sensitive applications.”

Rubber parts made of ELASTOSIL® LR 5040 are translucent with a delicate blue shimmer. Their volatiles content – without thermal post-treatment – is below the required 0.5 weight percent. Even in its non-post cured state, the silicone rubber already exhibits a high level of tear resistance equivalent to that of a post-cured high-tear-strength standard LSR. As a result, it can withstand even high mechanical stresses as may occur during the usage of baby bottle nipples or pacifiers, for example.

These properties make ELASTOSIL® LR 5040 the material of choice when manufacturers of baby-care, food-contact or medical products want to do without thermal post-treatment. Typical applications include feeding teats and pacifiers, teething rings, anti-colic valves, bottle tops and seals for food cans, but also respirator masks.

ELASTOSIL® LR 5040 can be readily processed by injection molding. Since molded parts made of this LSR only have to be post-cured in very few cases, production processes can be

greatly streamlined and automated to a high degree. This facilitates very efficient and cost-effective large-scale production.

The product line will initially cover a hardness range from 30 to 70 Shore A including 45 Shore A, a universally used grade in the baby-care sector. In the cured state, the actual hardness of the non-post cured silicone rubber deviates by no more than ± 3 points. The LSR is translucent and has a delicate blue shimmer, giving the silicone parts a particularly pure, high-quality appearance.

WACKER Optimizes LSR Product Portfolio

ELASTOSIL® LR 5040 made its debut at the K 2016 International Trade Fair for Plastics and Rubber in Düsseldorf, Germany, last October. At this year's Fakuma, the product line again takes center stage, sharing the spotlight with the heat-resistant solid silicone rubber ELASTOSIL® R *plus* 4350/55.

"The raw-materials sector has to meet ever tougher legal as well as industrial requirements. For instance, regulatory limits are tightening increasingly, especially as regards the amount of volatiles. This is a challenge for the entire chemical sector and also affects liquid silicone rubber grades", manager Christian Gimber notes. "In this respect, the trend is mainly being driven by the baby-care, food and automotive industry."

Reducing the volatile components will also have a positive impact on the properties of articles made of WACKER's LSR grades in general. "We decided to optimize our LSR portfolio and reduce the amount of

volatile substances significantly”, Gimber adds. “Thanks to cutting-edge production technologies now in use, we are able to go well beyond legal requirements. We are thus meeting tougher requirements, which immediately benefit our customers in a variety of ways.”

Visit WACKER at Fakuma 2017, Hall A6, Booth A6-6310.

Note to editors:

During the tradeshow, the fabrication of bottle nipples made from ELASTOSIL® LR 5040/45 will be demonstrated at the booth of metering and mixing technology expert DOPAG (Hall B5, Booth 5315).



The new liquid silicone line ELASTOSIL® LR 5040 has been specially developed for applications in the baby-care, food-contact and medical industries. Its products contain only few volatile components and exhibit excellent mechanical properties even without thermal post-curing.
(Photo: WACKER)



At Fakuma 2017, WACKER is presenting its new ELASTOSIL® LR 5040 product line. This liquid silicone rubber is extremely robust after curing and can be used in sensitive areas even without thermal post-curing.
(Photo: WACKER)

Note:

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

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The company in brief:

WACKER is a globally-active chemical company with some 13,450 employees and annual sales of around €4.6 billion (2016, excluding Siltronic). WACKER has a global network of 23 production sites, 19 technical competence centers and 49 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