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# PRESS RELEASE

Number 11

<u>IN-COSMETICS 2016:</u> WACKER Presents Self-Emulsifying Phenyl Silicone Fluid for Shampoos

Munich, March 21, 2016 – At in-cosmetics 2016, the Munichbased chemical company WACKER is presenting several novel products for the cosmetics industry. The focus is on the gloss agent BELSIL<sup>®</sup> PF 200, which was unveiled in 2015 at incosmetics Brazil and which is now also being presented to trade visitors from Europe. This modified phenyl silicone fluid is selfemulsifying and permits transparent preparations to be formulated. The silicone resin elastomer gel BELSIL<sup>®</sup> REG 1102 is celebrating a world premiere at in-cosmetics. It provides a pleasant skin feel, and imparts a long-lasting effect to cosmetic products. Another innovation is the silicone fluid emulsion BELSIL<sup>®</sup> DM 5102 E. It makes the hair supple and easy to comb. In-cosmetics takes place in Paris from April 12 to 14.

BELSIL<sup>®</sup> PF 200, has already been presented by WACKER at incosmetics BRAZIL 2015, and is now being launched on the European market. It is a chemically modified phenyl silicone fluid specifically designed for use in haircare and skincare products, as well as in decorative cosmetics. This fluid has a refractive index of 1.458, significantly higher than that of polydimethylsiloxanes. BELSIL<sup>®</sup> PF 200 therefore lends the hair an attractive silky gloss, improving its hand feel and reducing combing force; it gives the skin a fresh shimmer, making it pleasantly soft to touch.

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Unlike conventional phenyl silicone fluids, which are not soluble in water at all, BELSIL<sup>®</sup> PF200 is self-emulsifying due to its modified chemical structure: when water is added, it forms a transparent colloidal solution without the need for an emulsifier. BELSIL<sup>®</sup> PF 200 thus provides a way of using the gloss-enhancing effect of a phenyl silicone fluid in transparent aqueous formulations – something that was impossible until now. Since the modified phenyl silicone fluid is also lipophilic and compatible with many of the oils and esters used in cosmetics, it is also suitable for use in oil-based preparations and as a co-emulsifier in water-in-oil emulsions.

BELSIL<sup>®</sup> PF 200 is extremely versatile. It has applications ranging from hair-styling products – including water-based transparent products – through skin care, to foundation products. In face-care fluids, skin creams and body lotions, BELSIL<sup>®</sup> PF 200 gives the skin a silky supple feel, and a youthful appearance. In lip-balm products and color cosmetics, BELSIL<sup>®</sup> PF 200 enhances gloss and color brilliance.

### Long-Lasting Effect with BELSIL<sup>®</sup> REG 1102

BELSIL<sup>®</sup> REG 1102 is part of the silicone-resin elastomer gel portfolio. The new silicone resin elastomer gel BELSIL<sup>®</sup> REG 1102 combines the skin sensory properties of non-crosslinked silicone polymers with the film-forming effects of silicone resins. This combination of properties makes the gel a multifunctional active ingredient for skin-care and decorative cosmetic products. In addition to forming a pleasantly soft, water-repellent film that adheres well to the skin without feeling sticky, BELSIL<sup>®</sup> REG 1102 gel also lends

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products a unique texture that leaves the skin feeling extraordinarily soft and silky.

Thanks to its favorable film-forming and adhesion properties, BELSIL<sup>®</sup> REG 1102 makes cosmetic formulations more water- and transfer-resistant, thus providing lasting effects. It makes lipsticks kiss-proof, prevents makeup from rubbing off on clothing, and reduces the impact of water exposure on the protective effect of sunscreens. It also makes moisturizers and night creams unusually rich, ensuring their nourishing effects and excellent skin-feel properties are long lasting.

The solid phase of the gel is a silicone elastomer that is crosslinked via silicone resin segments. It forms a wide-meshed threedimensional network containing a non-volatile silicone fluid as the liquid phase in its molecular cavities. This transparent, colorless gel is a solid when at rest, but undergoes a reversible conversion to a liquid state in response to shear stress. Because of this shear-thinning behavior of BELSIL<sup>®</sup> REG 1102, products formulated with this material are easy to apply and spread readily over the skin. The ingredients of BELSIL<sup>®</sup> REG 1102 are listed in the Inventory of Existing Cosmetic Ingredients in China (IECIC 2015).

### For Soft Hair that is Easy to Comb: BELSIL® DM 5102 E

BELSIL<sup>®</sup> DM 5102 E, which is being premiered to a trade visitors at this year's in-cosmetics, expands WACKER's portfolio of silicone fluid emulsions. BELSIL<sup>®</sup> DM 5102 E – a low-viscosity liquid with a milky white appearance – is the nonionic finely disperse emulsion of a high-viscosity silicone fluid in water. As an emulsion, the silicone

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active agent is easy to process. The product is designed for use in shampoos, hair conditioners and hair masks. BELSIL<sup>®</sup> DM 5102 E makes normal and damaged hair smooth and supple, improves combability and has a pleasantly soft feel.

Because the silicone fluid droplets of the new emulsion are smaller than 300 nanometers, the silicone active agent is selectively deposited on the hair fibers during application of the preparation. BELSIL<sup>®</sup> DM 5102 E thereby achieves more effective silicone deposition, and is thus more efficient than less finely dispersed silicone fluid emulsions.

Visit WACKER at in-cosmetics 2016, Booth G90



The WACKER chemicals group will be presenting BELSIL<sup>®</sup> PF 200 silicone elastomer gel and other products at in-cosmetics Paris. The new phenyl silicone fluid has a high refractive index and is suitable for water-based formulations. (Photo: Wacker Chemie AG)

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### Note:

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#### The company in brief:

WACKER is a globally-active chemical company with some 17,000 employees and annual sales of around €5.3 billion (2015). WACKER has a global network of 25 production sites, 22 technical competence centers and 50 sales offices.

### WACKER SILICONES

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

### WACKER POLYMERS

Polyvinyl acetates and vinyl acetate copolymers 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

#### Siltronic

Hyperpure silicon wafers and monocrystals for semiconductor components