

PRESS RELEASE

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Preview European Coatings Show 2017 WACKER Presents Sustainable Silicone Resins for Weather- and Heat-Resistant Coatings

Munich, February 02, 2017 – At the European Coatings Show (ECS) 2017 in Nuremberg, WACKER will be showcasing the new binder SILRES® REN70-M for heat-resistant coatings. Combined with suitable pigments and fillers, the phenyl methyl silicone resin offers extreme thermal stability of up to 600 °C in coatings that are stable at high temperatures, making the product especially suitable for formulating coatings for industrial plants, engine parts, stoves or incinerators. In addition, SILRES® REN70-M is virtually free of aromatic solvents (< 0.1 %). WACKER will also present the new silicone intermediate SILRES® IC 235 for weather-resistant coatings. This silicone resin contains absolutely no aromatics and is used in coatings for bridges, wind turbine stators and industrial plants. The European Coatings Show will be held in Nuremberg, Germany, from April 4 to 6, 2017.

SILRES® REN70-M is virtually free of aromatic solvents, thus providing an alternative to conventional binders for extremely heat- and weather-resistant industrial coatings. These kind of silicone resin binders are typically supplied as a solution in aromatic solvents such as xylene. Instead, SILRES® REN70-M uses 1-methoxy-2-propyl acetate as a solvent, which is biodegradable.

SILRES® REN70-M offers the ideal combination of hardness and flexibility. As a binder in heat-resistant coatings it effectively protects

metal surfaces from corrosion even at high operating temperatures or rapid temperature fluctuations.

The binder dries tack-free even at room temperature. SILRES[®] REN70-M is also characterized by full chemical curability, which takes place via reactive silanol groups. Catalytic support makes it possible to achieve complete chemical cure in just 20 minutes at 180 °C, which means the silicone resin cures faster than comparable products. The cured binder easily passes solvent rub tests. This makes SILRES[®] REN70-M ideally suited to use as a binder in coatings for industrial plants, pipework or engine parts. SILRES[®] REN70-M also provides the resistance needed for coatings on barbecues, chimneys, wood-burning stoves or gas-fired incinerators.

SILRES[®] IC 235 – An Aromatic-Free Intermediate

Industrial coatings essentially consist of a binder, pigments, fillers, additives and solvents. The individual ingredients play a key role in a coating's performance. However, adding fully crosslinked polysiloxanes makes it possible to improve the chemical and physical properties of the binder.

At this year's ECS, WACKER will be presenting a new polysiloxane-based intermediate to optimize organic binders. SILRES[®] IC 235 consists of a methoxy-functional phenyl methyl polysiloxane with a low molecular weight distribution. The intermediate SILRES[®] IC 235 does not require any aromatics.

The new silicone resin has been designed so that an addition of only 15 percent is sufficient to improve the UV and weathering resistance of the organic binder in a coating system – without detracting from its

mechanical properties. Weathering and lab tests have shown that SILRES[®]IC 235 provides for substantially improved gloss retention, greater protection against weathering and an extended useful life. Additionally, a higher percentage of silicone in the binder improves the heat resistance of the coating system up to 300 °C. SILRES[®] IC 235 is used, for example, in coatings for static metal structures such as bridges or railings and in industrial plants.

Visit WACKER at ECS 2017, Hall 1, Booth 1-510.



SILRES® REN70-M is a highly heat-resistant binder, making it suitable for coating mufflers, engine parts, stoves or incinerators (photo: Wacker Chemie AG).

Note:

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<http://www.wacker.com/pressreleases>

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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