EUROPEAN COATINGS SHOW 2015: WACKER Launches New Silicone Resin for Water-Repellent Wood Coatings and Polymeric Binders for Brilliant Exterior Paints and Environmentally Sound Facade Systems

Munich, April 21, 2015 – The Munich-based WACKER Group is presenting new binders and additives for the paint and surface-coating industries at the European Coatings Show (ECS) in Nuremberg, Germany, which runs from April 21 to 23, 2015. New silicone resin emulsion SILRES® WH can be used as a hydrophobizing wood impregnating agent or as an additive in wood stains. Wood impregnated with SILRES® WH is protected against damp, moisture and the subsequent damage caused by fungi and insects for an exceedingly long time. Also celebrating its premiere is the first product in the new PRIMIS® line for high-quality outdoor applications: the binder PRIMIS® AF 1000 combines organic and inorganic components, enabling the formulation of brilliant, highly durable, exterior paints with reduced dirt pick-up. WACKER is also unveiling VINNAPAS® LL 3031, an environmentally sound polymer dispersion for indoor and outdoor paints and facade systems.

At the ECS 2015, WACKER is premiering a silicone resin emulsion for wood protection coatings. The emulsion possesses hydrophobic properties that reliably protect wood outdoors against wet and damp and the damage that these cause. SILRES® WH, as the product is called, is flexible enough to adhere strongly to wood surfaces, and
imbues them with the water-repellent properties that are typical of silicones for many years. Weathering tests show that the product still protects impregnated wood against moisture and damp after 15 years. This means that silicone resins, which have proved successful at protecting mineral substrates over the decades, can now provide wood with lasting outdoor protection, too.

The 50-percent emulsion is based on a functional silicone resin and can serve as a water-repellent impregnating agent or as an additive for formulating film-forming wood stains. Due to its hydrophobic properties, SILRES® WH reduces the water uptake of wood and so keeps its water content low. Weathering tests have shown that the silicone resin’s impregnating effect lasts for many years. Consequently, the wood is better protected against typical damage, such as fungus, mildew and insect attack, as well as cracks caused by swelling and shrinking. The use of biocides can be slashed as a result. SILRES® WH added to paints and wood stains confers lasting water repellency, even in low concentrations.

The water repellency is clearly revealed by the beading effect which SILRES® WH produces on wood surfaces. By providing wood with long-term protection, SILRES® WH greatly reduces the frequency of renovation and repainting compared with conventional wood preservatives. Best results are obtained by diluting it 1:4 to 1:9 with water. In waterborne stains, SILRES® WH is admixed in amounts of up to three percent.

To watch a video clip about SILRES® WH, go to http://www.wacker.com/ecs-clips
Less Dirt and More Color: PRIMIS® AF 1000

A further ECS 2015 highlight is the new PRIMIS® line, comprising binders and additives for advanced, high-value paints and architectural coatings. The new line combines organic and mineral components to deliver a binder with a completely novel property profile. The elastic, acrylic-ester-based, organic component performs a binder’s traditional role, offering strong adhesion and cohesion, good mechanical properties and enhanced processability. The solid mineral components, on the other hand, have outstanding protective properties and ensure long-lasting, bright colors and reduced dirt pick-up.

PRIMIS® AF 1000 offers improved scratch and abrasion resistance, optimized thermal conductivity and water-vapor permeability, simple processing and even distribution. Additionally, the dispersion is characterized by excellent film formation, even at low outdoor temperatures, and by its elasticity while the polymer surface exhibits maximum blocking resistance. What is more, it has low flammability due to its mineral content. The dispersion’s good pigment compatibility and color consistency keep exterior paints bright for longer – extending renovation cycles and, in turn, positively impacting overall costs.

The new PRIMIS® AF 1000 dispersion is ideal for challenging exterior applications and expands WACKER’s extensive portfolio designed for plasters and exterior coatings.

*To watch a video clip about PRIMIS® AF, go to [http://www.wacker.com/ecs-clips](http://www.wacker.com/ecs-clips)*
VINNAPAS® LL 3031: For High-Quality Interior and Exterior
Paints and Facade Systems

Also new at the ECS 2015 is VINNAPAS® LL 3031, a waterborne polymer dispersion that is based on vinyl acetate, ethylene and vinyl chloride and has a very low environmental impact. The dispersion is produced without the use of alkylphenol ethoxylates (APEOs), plasticizers, film-forming agents or solvents, is low-odor and boasts an extremely low formaldehyde content (< 20 ppm). It also lends itself to paint formulations that have a low volatile-organic-compound content (VOC < 1 g/l).

VINNAPAS® LL 3031 is a general-purpose binder for paints and plasters used both indoors and outdoors. It provides high color consistency, good pigment compatibility, high saponification resistance and compatibility with silicates. It is very easy to process and offers enhanced rheology. VINNAPAS® LL 3031 dries quickly, but still possesses high binding power and abrasion resistance. As the dispersion yields flame-retardant polymer films, it is ideal for plasters and embedding coats for external thermal insulation composite systems (ETICS). Moreover, VINNAPAS® LL 3031 combines perfectly with silicone resin products from the SILRES® BS range to yield water-repellent facade systems.

Visit WACKER at the European Coatings Show 2015 in Hall 1, Booth 1-510.
New silicone resin emulsion SILRES® WH provides wood with long-lasting protection against moisture and damp, as evidenced by the beading effect on impregnated wood (right). In contrast, the untreated wood (left) soaks up wet immediately. By providing long-term protection, SILRES® WH greatly reduces the frequency of renovating and recoating exterior woodwork (photo: Wacker Chemie AG).

Lab test of flame retardant properties: Paints and plasters formulated with the new dispersion VINNAPAS® LL 3031 (left) are less combustible and burn more slowly compared to styrene-acrylate-based alternatives (right) (photo: Wacker Chemie AG).
Color stability testing: the effects of months of outdoor weather conditions can be simulated by alternating heat and cold, UV light and moisture in the lab. Even after 1,000 hours, the colors of the sample formulated with the new PRIMIS® AF 1000 dispersion (right) remain unchanged, whereas the commercial alternative (left) exhibits signs of weathering in the test area (photo: Wacker Chemie AG).

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 16,700 employees and annual sales of
around €4.83 billion (2014).
WACKER has a global network of 25 production sites,
21 technical competence centers and 48 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 used as binders for construction chemicals, paints and coatings, adhesives, plasters, textiles and nonwovens, as well as for polymeric materials based on renewable resources

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