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EUROPEAN COATINGS SHOW 2013: WACKER Presents Novel Polymer Binders for Concrete and Construction Applications

Munich, January 9, 2013 – At the European Coatings Show (ECS) in Nuremberg from March 19 to 21, 2013, the Munich-based WACKER Group is showcasing its latest polymer binders for concrete modification and environmentally sound construction applications. The new ETONIS® 260 makes drainage concrete for road surfacing in railway tunnels durable yet water-permeable. This enables rescue vehicles and fire engines to get to the scene of an accident inside a tunnel quickly and without any problems. Furthermore, it facilitates the transport of moisture from the tunnel, significantly reduces the formation of puddles or backed-up water and makes the surface more durable overall. WACKER is also presenting the new VINNAPAS® 5111 L, a VOC-reduced powder for the formulation of self-leveling flooring compounds that conform to strict eco-labeling requirements, such as EMICODE® EC1+ or Blue Angel. With its VINNAPAS® LL 5518 H, WACKER is introducing a particularly hydrophobic novel dispersible polymer powder for applications in damp rooms or outdoors.

At this year’s ECS, WACKER is showcasing the new ETONIS® 260 for use in open-pored concrete roadways in railway tunnels for the first time. In the tunnels, the polymer-modified drainage concrete is spread beside and between the tracks to form a level, approximately
16-cm-thick layer, which is easy for vehicles to drive on. While tracks allow trains to quickly and safely glide through tunnels, they are often a hindrance for rescue vehicles and fire engines. The polymer-modified concrete surfaces now allow these vehicles to reach the scene of an accident inside a tunnel quickly and without any problems in the case of an emergency.

A special characteristic of the polymer-modified drainage concrete – which was developed together with HeidelbergCement AG – is its open-pored nature. The drainage concrete thus has many cavities and is water permeable. This facilitates the transport of moisture from the tunnel and significantly reduces the formation of puddles or backed-up water, especially near the tunnel entrance. This is also a considerable advantage when large amounts of water are used in firefighting.

The new ETONIS® 260 optimizes the properties of both fresh and hardened concrete: fresh concrete is easier to process and compact and, thanks to an increase in viscosity, less prone to run through during concrete compaction. Additionally, the new polymer improves the non-sag properties and extends the fresh concrete’s processing window. In hardened concrete, ETONIS® 260 significantly increases the flexural and tensile strength of the concrete surfacing and augments its resistance to frost and road salts. This results in far fewer cracks forming in the concrete, which makes the surface more hard-wearing and durable overall. The concrete’s adhesive properties also improve, so that it bonds firmly and reliably to the lower surfacing layer.

The drainage concrete is quicker to put down than prefabricated concrete slabs. Since it does not contain any joints, it also forms a
smoother and more level surface that’s better for driving on. The open-pored surface has another positive effect: the drainage concrete’s cavities absorb sound and thus contribute to noise pollution prevention. WACKER and HeidelbergCement already tested this property in a joint project in 2010, in which sound absorbers made of drainage concrete were incorporated around the tracks of a tram test section in Brussels.

Overall, the new concrete modified with ETONIS® 260 is not just water permeable and quick to put down, but also extremely durable, stable and easy to handle and install – and thus ideal for road surfacing in road, tunnel and underground construction.

**VINNAPAS® 5111 L for Smooth and Environmentally Sound Self-Leveling Flooring Compounds**

The new VINNAPAS® 5111 L dispersible polymer powder is perfect for formulating self-leveling flooring compounds: the powder generates an extremely smooth, uniform surface while also offering high abrasion resistance, flexural and compressive strength. The binder further features optimized leveling properties and low viscosity.

Moreover, VINNAPAS® 5111 L offers improved defoaming properties: it not only permits exceptionally smooth surfaces without air bubbles, but also allows self-leveling flooring compounds to be formulated with a very low content of volatile organic compounds (VOC). The product thus meets the latest environmental and safety standards and can be used to produce self-leveling flooring compounds conforming to strict eco-labeling requirements, such as EMICODE® EC1+ or Blue Angel.
VINNAPAS® LL 5518 H for Hydrophobic Applications

The new VINNAPAS® LL 5518 H is another product innovation for the construction sector: the dispersible polymer powder exhibits very good hydrophobic and improved processing properties. Furthermore, it’s much easier to wipe after film formation. VINNAPAS® LL 5518 H is thus particularly suitable as a binder in grouts and plasters and completes WACKER’s extensive portfolio of dispersible polymer powders for applications in damp rooms or outdoors.

Visit WACKER at the European Coatings Show 2013 in Hall 1, Booth 1-510.

Drainage concrete modified with ETONIS® 260 is spread between and beside tracks and thus provides rescue vehicles and fire engines with fast access to railway tunnels. The concrete is water permeable, quick to put down, extremely durable and stable, and thus ideal for applications in road, tunnel and underground construction (photo: Wacker Chemie AG, courtesy of Deutsche Bahn AG).
The new VINNAPAS® 5111 L is ideal for extremely smooth and uniform self-leveling flooring compounds. The VOC-reduced powder further enables formulations that conform to strict eco-labeling requirements, such as EMICODE® EC1+ or Blue Angel (photo: Wacker Chemie AG).

The highly hydrophobic VINNAPAS® LL 5518 H dispersible polymer powder is an ideal binder for grouts and plasters in applications in damp rooms or outdoors (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 17,200 employees and annual sales of around €4.91 billion (2011). WACKER has a global network of 24 production sites, 19 technical competence centers and 53 sales offices.

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

WACKER POLYMERS
Polyvinyl acetate 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

Silitronic
Hyperpure silicon wafers and monocrystals for semiconductor components