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PRESS RELEASE

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WACKER Presents the First Ever Renewables-Based Dispersible Polymer Powder for Construction Applications via the Mass Balance Approach

Munich, March 24, 2020, WACKER is expanding its new product line of polymeric binders based on renewable raw materials. With its VINNECO® brand, the Munich-based chemical Group will offer a redispersible polymer powder manufactured using biobased acetic acid. The new redispersible polymer powder VINNECO® 5044 N is mainly suitable for producing construction materials, such as waterproofing membranes or dry-mix mortars for external thermal insulation composite systems (ETICS).

Ecological and sustainable building construction plays a key role in global efforts to reduce climatically harmful carbon dioxide. As architects and property developers increasingly turn to renewable raw materials, ever more manufacturers of construction materials are now offering such solutions.

“By 2030, 90 percent of our portfolio will consist of products rated as sustainable or at least neutral,” says Frank Reichle, Director of Construction Polymers in Western Europe at WACKER. “With VINNECO® 5044 N, we are taking yet another step in this direction by offering our customers a sustainable alternative to VINNAPAS® 5044 N in the future. Our VINNECO® product line allows producers to replace fossil raw materials with renewables,” Reichle continues.

In the production of the new dispersible polymer powder, WACKER relies on biobased acetic acid. This substance is formed as a byproduct of wood-industry processes such as preparing fibrous material for paper manufacturing. The wood is sourced from forests certified by the PEFC® (*Programme for the Endorsement of Forest Certification Schemes*) and located within a 400-km radius of WACKER's Burghausen site. The biobased acetic acid is extremely pure with a low water content and, thanks to its excellent quality, represents a real alternative to fossil sources such as natural gas or petroleum.

WACKER uses biobased acetic acid and ethylene to produce vinyl acetate monomer, which – again using ethylene – is copolymerized to form vinyl acetate-ethylene (VAE). The resulting liquid polymer dispersions are used, e.g., in paint manufacturing. WACKER then uses these dispersions to manufacture dispersible polymer powders in huge spray dryers, where they are atomized and fed into a stream of hot gas, which flash dries them to yield a fine powder. These binders are added to construction applications such as dry-mix mortars, tile adhesives or waterproofing membranes to provide them with a high degree of flexibility and adhesion.

In production, biobased acetic acid can be blended with conventional acetic acid, and is thus directly coupled into WACKER's existing production line. The quality and properties of the binders are absolutely identical, irrespective of whether the VAE they contain has been made from conventional or biobased acetic acid. The compound always has the same chemical and physical properties. Manufacturers who have already used VINNAPAS® 5044 N for the production of dry-mix mortars can thus retain their processes and do not need to modify their formulations.

VINNECO® 5044 N is rheologically neutral and improves the adhesion, flexural strength, deformability, abrasion resistance and processability of the modified compositions without significantly influencing their flow, thixotropy or water retention. The binder is particularly suitable for formulating low-emission mortars with high flexibility and very good adhesion to organic substrates such as polystyrene, which is used, e.g., in external thermal insulation composite systems (ETICS).

WACKER uses the mass balance method to verify the proportion of biobased acetic acid in the finished product. TÜV SÜD, the technical inspectorate and certification body, has certified this method as meeting its international CMS 71 standard. When customers order a specific quantity of VINNECO® 5044 N, they can be sure that the required amount of biobased acetic acid has been fed into the integrated production system. As verification, the customer receives a TÜV certificate attesting to the use of the renewable raw material. Thanks to the mass balance method, it will be possible in future to produce and certify all the other products of the VINNAPAS® line as sustainable alternatives.

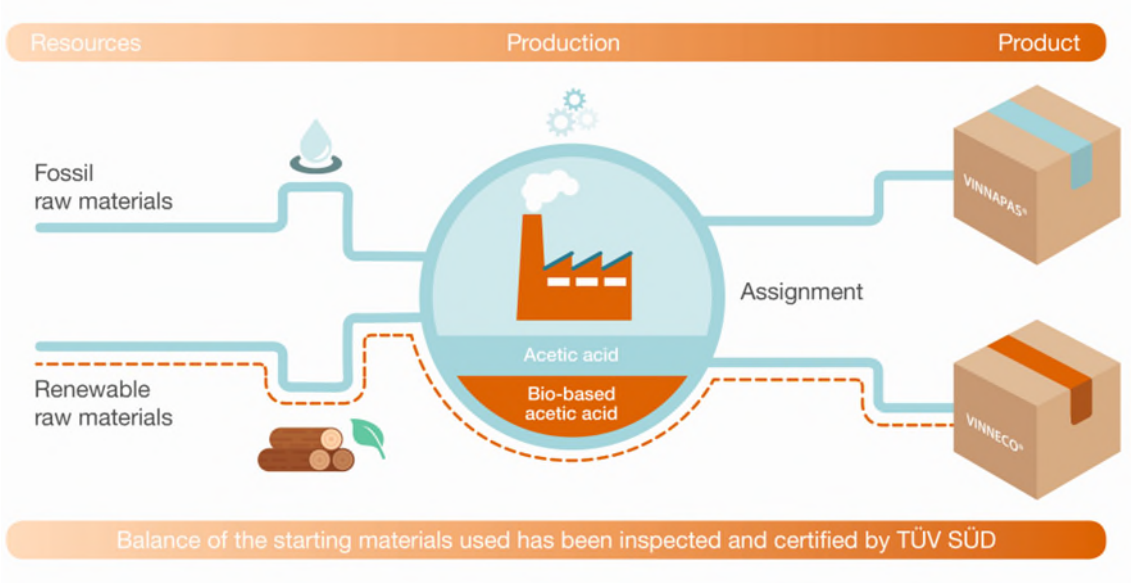
WACKER had already presented the first products in the VINNECO® line at the European Coatings Show 2019. Besides the new dispersible polymer powder, the Group's international portfolio now includes eight different dispersions for use in indoor paints and plasters, adhesives, carpets and technical fabrics.

About WACKER POLYMERS

WACKER can look back at over 80 years' experience in the manufacture of polymer binders. Today, WACKER is a leading producer of state-of-the-art binders and polymeric additives based on polyvinyl acetate and vinyl acetate

copolymers. These take the form of dispersible polymer powders, dispersions, solid resins, and solutions. The products are used in construction chemicals, paints, surface coatings, adhesives and nonwovens, as well as in fiber composites and polymeric materials based on renewable resources. WACKER operates production sites for polymer binders in Germany, China, South Korea and the USA, as well as a global sales network and technical centers in all major regions.

The Mass Balance Method



If raw materials from renewable and traditional – usually fossil-based – resources are used as starting materials within the same integrated production system, the mass balance approach can be used for mathematically assigning the portion of renewable raw materials to individual sales products. This approach is comparable to the green electricity certification system used in Germany. WACKER's mass balance method for verifying renewable raw materials in production has been certified by the international TÜV SÜD technical inspectorate. This gives WACKER a recognized method for tracking

its use of renewable resources throughout the entire production process, up to the finished product. To qualify, suppliers of renewables must use a sustainable manufacturing process for the raw materials that WACKER purchases, and all of the required starting materials must also be obtained from sustainable sources. WACKER must also undergo an annual TÜV inspection to verify that the appropriate amount of renewable raw materials is always added during the production of declared products. (Image: Wacker Chemie AG)

These binders provide a high degree of flexibility and adhesion in construction applications such as dry-mix mortars, tile adhesives or waterproofing membranes. (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 14,700 employees and annual sales of around € 4.93 billion (2019).
WACKER has a global network of 24 production sites, 23 technical competence centers and 51 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