

CONSTRUCTION | DISPERSIBLE POLYMER POWDER | VINNAPAS® eco

VINNAPAS® eco 5044 N: DISPERSIBLE POLYMER POWDER BASED ON RENEWABLE RAW MATERIALS VIA THE BIOMASS BALANCE APPROACH

The construction industry, too, is faced with the challenge of increasing its contribution to sustainability. One possibility is to replace fossil with renewable raw materials wherever possible. VINNAPAS® eco broadens the available options by providing the first ever dispersible polymer powder focused entirely on saving fossil resources.

VINNAPAS® eco:

Certified for More Sustainability

VINNAPAS® eco dispersible polymer powders are chemically identical to VINNAPAS® dispersible polymer powders. The only difference is that raw materials are entirely replaced in VINNAPAS® eco with renewable raw materials via the biomass balance approach. For VINNAPAS® eco 5044 N, this is audited by TÜV Nord according to the REDcert² certification scheme.

VINNAPAS® eco 5044 N: Easy to Use

Since VINNAPAS® eco 5044 N has the same properties as VINNAPAS® 5044 N, it can be readily used as a drop-in replacement for VINNAPAS® 5044 N in any existing formulation. There are no technical changes to the formulation, but the customer receives a REDcert² certificate confirming the use of the renewable raw material.

Effective and Versatile

VINNAPAS® eco 5044 N is based on a highly flexible copolymer of vinyl acetate and ethylene and has a glass transition temperature (T_g) below the freezing point of water. Being rheologically neutral, VINNAPAS® eco 5044 N offers formulators a high degree of freedom.

In dry-mix mortars, VINNAPAS® eco 5044 N improves key properties:

- Very good bond strength/adhesion, including to organic substrates such as polystyrene
- High flexural strength
- Excellent plasticity
- High abrasion resistance

Properties of VINNAPAS® eco 5044 N

Polymer base	VAc-E
MFFT [°C]	0
Protective colloid	PVOH
Flexibility	Very flexible

Improved Processing

VINNAPAS® eco 5044 N additionally optimizes the processability of the modified compounds without significantly influencing flow, thixotropy or water retention. It can therefore be advantageously combined with additives to obtain special processing properties.

Ideal for Low-Emission Mortars

VINNAPAS® eco 5044 N contains a fine-particulate mineral filler as antiblocking agent. It is produced without the addition of organic solvents, plasticizers or film-forming agents, and is particularly suitable for formulating highly flexible, low-emission mortars.

Applications of VINNAPAS® eco 5044 N

Adhesive and base coats	●●●
One-component cementitious waterproofing membranes	●●●
Concrete repair	●●●

●●● Highly recommended ●● Recommended ● Suitable





FEWER FOSSIL RAW MATERIALS: THE VINNAPAS® eco PRODUCT CONCEPT

WACKER intends to become carbon neutral with sustainable products by 2050. By 2030, 90% of our products should be making a neutral or positive contribution to sustainability. One milestone along this route is the replacement of fossil raw materials using the biomass balance approach. This already allows us to use renewable raw materials in existing production processes.

Renewable Raw Materials – Wherever Possible

For our polymer binders, a good starting point is acetic acid: it is required to produce our basic monomer vinyl acetate, and can be obtained from either fossil resources or wood waste. Bio-based acetic acid is used in all VINNAPAS® eco prod-

ucts. We use it not only as a substitution for acetic acid from fossil sources, but also to offset other fossil raw materials, so that our VINNAPAS® eco binders are permitted to carry the label “fossil resources saving product by using renewable raw materials in the value chain.”

Where Does Bio-Based Acetic Acid Come From?

We only use acetic acid that is produced as a byproduct of wood-industry processes, such as preparing fibrous material for paper manufacturing. The wood is sourced from sustainably managed forests located within a 400-km radius of WACKER's Burghausen site and the bio-based acetic acid is certified by PEFC® (Programme for the Endorsement of Forest Certification).

A Small Step with a Big Impact

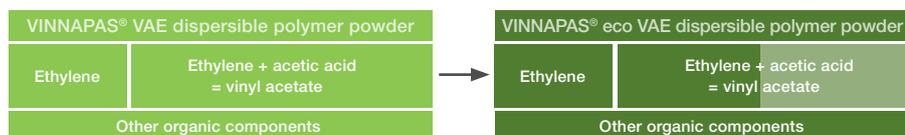
By substituting and offsetting fossil raw materials with bio-based acetic acid according to the biomass balance approach, we can immediately increase the proportion of renewable raw materials in our production.

The same applies to our customers: The certified VINNAPAS® eco product can already replace the corresponding VINNAPAS® product. This means:

The more VINNAPAS® eco products manufactured, the higher the proportion of renewable raw materials in our production and on the market.

We have currently certified some of our polymer dispersions and dispersible polymer powders using this approach. And in the future we will be able to produce and certify all other products in the VINNAPAS® range as sustainable alternatives. Talk to us!

Biomass Balance Approach for a VAE Dispersible Polymer Powder



■ is compensated ■ is substituted

The international REDcert² certification scheme defines an MBU (biomass balance unit): for example the lower heating value of methane. This forms the basis for calculating equivalent MBUs for each ingredient.

For raw materials that cannot be directly substituted, the corresponding quantity of MBUs of bio-based acetic acid is fed in instead.

An independent body (the German technical inspectorate TÜV Nord) monitors that the necessary amount of bio-based acetic acid is also fed into the integrated production system. As verification, the customer receives a REDcert² certificate attesting to the use of the renewable raw material.



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The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.