

# VINNAPAS® 4449 E (Scale-up Product)



## Dispersible Polymer Powders

VINNAPAS® 4449 E (Scale-up Product) is a multi-purpose dispersible polymer powder for dry mix mortars, specifically suited for ETICS. It is based on a very flexible copolymer of vinyl acetate and ethylene and belongs to the product class VINNAPAS® E and provides adhesion and flexibility, improved performance on workability, consistency and wetting capability. VINNAPAS® 4449 E (Scale-up Product) is in the process of introduction into industrial use (Scale-up Product). Therefore the product data given are subject to change. Always consult WACKER POLYMERS about the product's availability before using it for industrial purposes.

## Properties

- VINNAPAS® 4449 E (Scale-up Product) is a copolymer powder of vinyl acetate and ethylene and is dispersible in water.
- Because of its relatively high ethylene content, this resin is soft and flexible. Its glass transition temperature (T<sub>g</sub>) is below the freezing point of water.
- Dry-mix mortars modified with VINNAPAS® 4449 E (Scale-up Product) exhibit improved adhesion, flexural strength, deformability, and abrasion resistance.
- VINNAPAS® 4449 E improves fresh mortar workability and consistency. The mortar is softer, creamy and easier to process with improved troweling properties, while its thixotropy remains essentially unaffected.
- VINNAPAS® 4449 E (Scale-up Product) contains a fine mineral filler as an antiblocking agent. It is produced without the addition of organic solvents, plasticizers and film-forming agents.
- VINNAPAS® 4449 E (Scale-up Product) is a dispersible polymer powder in the lower T<sub>g</sub> range. It is suitable for formulating highly flexible compounds with very good adhesion to organic substrates (polystyrene) and end products with low emissions. It can be used in applications where improved fresh mortar properties are key.

## Technical data

### Specification

Property	Condition	Value	Method
Ash content	1000 °C	max. 13 %	specific method
Solids content	-	min. 98 %	DIN EN ISO 3251
Bulk density	-	405 - 555 kg/m <sup>3</sup>	DIN EN ISO 60
Particle size	> 400 µm	max. 4 %	DIN EN ISO 4610

### General Characteristics

Property	Condition	Value	Method
Appearance	-	white to light beige powder	Visual
Minimum film forming temperature	-	0 °C	DIN ISO 2115
Protective colloid / emulsifier system	-	polyvinyl alcohol	-

These figures are only intended as a guide and should not be used in preparing specifications.

All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

## Applications

- Adhesive & Base-Coat Mortars
- Mineral Renders & Plasters

## Application details

For typical application fields of VINNAPAS® 4449 E (Scale-up Product), refer to the section "application". Please discuss additional applications with your WACKER customer representative.

### Processing

For the production of ready-mixed dry mortars, such as adhesives and patching compounds, blend VINNAPAS® 4449 E (Scale-up Product) with the other dry ingredients in appropriate equipment. Temperatures should not be allowed to rise excessively during mixing because otherwise the dispersible polymer powder could agglomerate by virtue of its thermoplastic properties. The mortar is prepared for use by adding the recommended amount of water and mixing mechanically or by hand. Since hand mixing generates little shear force, we recommend allowing the fresh mortar to slake for 5 minutes and then stirring it again. This is usually unnecessary where mechanical mixers are employed.

## Additional information

If the product is used in applications other than those mentioned, the choice, processing and use of it is the sole responsibility of the purchaser. All legal and other regulations must be complied with.  
Slight color variations of the polymer granulate may occur without impairing the product's functionality.

## Packaging and storage

### Packaging

25 kg paper bags Big Bags or bulk on request.

### Storage

During storage, protect the product from contact with moisture. Prolonged storage at temperatures above 30 °C, especially in combination with pressure, humidity or exposure to sunlight, may result in blocking. Carefully seal any open containers and store them under suitable conditions. We recommend storing the product in a warehouse that provides cool and dry conditions. Do not store the product for more than six months, starting from the date at which it was received, unless the Certificate of Analysis contains a different date, which would take precedence. If the product is stored longer than recommended, it may still be used but users are advised to verify the properties required for the intended use.

## Safety notes

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. These are available on request from WACKER sales offices or may be downloaded from the WACKER Web site [www.wacker.com/vinnapas](http://www.wacker.com/vinnapas).

## QR Code VINNAPAS® 4449 E (Scale-up Product)



## For technical, quality or product safety questions, please contact:

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The data presented in this medium 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 medium 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.