

# VINNAPAS® 224 HD



## Polymer Dispersions

VINNAPAS® 224 HD is a multi-purpose construction dispersion for liquid and paste, cement-free binder technology, specifically suited for primers, ready-to-use tile adhesives and one-component dispersion-based water-proofing membranes. It is based on a hard copolymer of styrene and acrylate and belongs to the product class VINNAPAS® HD which means that it provides a remarkable hydrophobic effect in addition to the excellent adhesion even under wet conditions.

## Properties

- VINNAPAS® 224 HD is a fine-particle dispersion of a special styrene/acrylate copolymer.
- VINNAPAS® 224 HD has excellent pigment-binding capacity and very good adhesion to inorganic substrates.
- VINNAPAS® 224 HD is ideal for manufacturing construction and tile adhesive paste with extremely good wet adhesion properties.
- VINNAPAS® 224 HD is also used as a binder for roofing compounds, high-quality synthetic-resin and silicone-resin plasters, and as a primer for flooring compounds.

## Specific features

- Hydrophobic

## Technical data

### Specification

Property	Condition	Value	Method
Viscosity, dynamic	23 °C   Brookfield, spindle 5 / 20 rpm	6000 - 12000 mPa·s	DIN EN ISO 2555
pH	-	7.5 - 8.5	DIN/ISO 976
Content Solids	-	49.0 - 51.0 wt. %	DIN EN ISO 3251

### General Characteristics

Property	Condition	Value	Method
Minimum film forming temperature	-	approx. 12 °C	DIN ISO 2115
Predominant particle size	-	approx. 100.0 nm	specific method
Protective colloid / emulsifier system	-	surfactants	specific method
Appearance of the dispersion film	-	glossy	Visual
Glass transition temperature	-	approx. 20.0 °C	specific method
Compatibility with cement	-	incompatible	specific method
Film-forming aids, solvents, plasticizers	-	2,18 %	-

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
- One Component Ready-to-use Waterproofing Membranes
- Primer
- Ready-to-Use Tile Adhesives

## Application details

VINNAPAS® 224 HD has excellent shear stability at pH values above 7.5 and is therefore easy to process. The dispersion is readily compatible with conventional fillers and pigments. The only exceptions are platelet pigments, such as kaolin, which raise the viscosity of the batch. The correct type and amount of wetting agent can be easily determined by storage stability tests of the pigmented batch at elevated temperatures in a drying cabinet at 50 °C. Film-forming aids: VINNAPAS® 224 HD already contains small amounts of 2,2 ,4-Trimethyl-1,3-pentanediol monoisobutyrate and forms a film at temperatures above 12°C. If a lower film-forming temperature is desired, additional film-forming agents must be used.

Films produced from this dispersion have excellent resistance to water and alkalis, with only slight water absorption and greatly delayed whitening. Plasters based on this dispersion therefore show very little tendency to soften under prolonged immersion in water. VINNAPAS® 224 HD is particularly recommended for producing ready-to-use construction adhesives, which have outstanding adhesion bond strength even when exposed to water. This improved wet adhesion is particularly useful for ceramic tiles adhesives (class D2 according to EN 12004).

For typical application fields of VINNAPAS® 224 HD, refer to the section "application". Please discuss additional applications with your WACKER customer representative.

## Packaging and storage

### Packaging

Non-returnable PE drums of 150 kg capacity (standard dispatch quantity: only fully-loaded pallets à 750 kg), non-returnable containers of 1 t capacity and road tankers.

### Storage

When the dispersion is stored in tanks, proper storage conditions must be maintained. The product has a shelf life of 6 months starting from the date of receipt if stored in the original, unopened containers at temperatures between 5 and 30 °C. Any longer periods for the maximum storage period that may be described in the Certificate of Analysis which accompanies each shipment of the product, take preference over this suggestion in which case the time period stated in the Certificate of Analysis shall be solely authoritative. Iron or galvanized iron containers and equipment are not recommended. Corrosion could result in discoloration of the dispersion or blends made from it in further processing. We therefore recommend the use of containers and equipment made of ceramic, rubberized or enameled materials, appropriately finished stainless steel, or plastic (rigid PVC, polyethylene or polyester resin). As polymer dispersions may tend to superficial film formation, skins or lumps may be formed during storage or transportation. A filtration process is thus recommended prior to utilization of the product.

### Preservation for Transport, Storage and further Processing

The product is adequately preserved during transportation and storage if kept in the original, unopened containers. However, if it is transferred to storage tanks, the dispersion should be protected against microbial attack by adding a suitable preservative package.

Measures should also be taken to ensure cleanliness of the tanks and pipes. In unstirred tanks, a layer of preservative-containing water should be sprayed onto the surface of the dispersion to prevent the formation of unwanted skin and possible attack by microorganisms. The thickness of this water layer should be < 5 mm for low viscosity dispersions and up to 10–20 mm for high viscosity products. Proper procedures – periodic tank cleaning and sanitization – must be set up in order to prevent microbial attack. Contact your biocide representative/supplier for further plant hygiene recommendations. Measures should be taken to ensure that only clean air enters the tank when the dispersion is removed.

Finished products manufactured from polymer dispersions usually also require preservation. The type and scope of preservation will depend on the raw materials used and the anticipated sources of contamination. The compatibility with other components and the efficacy of the preservative should always be tested in the respective formulation. Preservative manufacturers will be able to advise you about the type and dosage of preservative required.

## Safety notes

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

## QR Code VINNAPAS® 224 HD



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

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