

# VINNAPAS® EPN 865

## Polymer Dispersions

VINNAPAS® EPN 865 is a self-crosslinking, aqueous polymer dispersion based on the monomers vinyl acetate and ethylene. VINNAPAS® EPN 865 is produced without the use of plasticizer.

## Properties

- Excellent heat-sealability on cotton & polyester fabrics with low discoloration.
- VINNAPAS® EPN 865 is particularly recommended as a binder for glass fiber scrims.
- Wet polymer residues can be removed from equipment & application devices with water. Once properly cured the binder provides fair wet resistance.

## Technical data

### Specification

Property	Condition	Value	Method
Solids content	-	54 - 58 %	DIN EN ISO 3251
Viscosity, dynamic	23 °C	1000 - 4000 mPa·s	DIN EN ISO 2555
pH	-	4 - 5	DIN/ISO 976

## General Characteristics

Property	Condition	Value	Method
Minimum film forming temperature	-	approx. 6 °C	DIN ISO 2115
Frost resistance	-	protect against freezing	specific method
Protective colloid / emulsifier system	-	polyvinyl alcohol	-
Filler and pigment compatibility	-	very good	specific method
Appearance of the dispersion film	-	opaque	Visual
Glass transition temperature	-	approx. 20 °C	specific method

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

- Hot Sealing Property & High Frequency Welding Capability
- Textile Printing

## Application details

### General

VINNAPAS® EPN 865 can be applied by impregnation, roller or knife coating. Temperatures above 150 °C are necessary to achieve proper crosslinking. VINNAPAS® EPN 865 binds well to various fiber types including cellulose, viscose, glass and polyester.

### Polymer Dispersions

Formulating recommendations include the addition of catalyst and a wetting surfactant. Catalysts should be added to the dispersion as a 10% solution under good agitation. Typical catalysts include ammonium chloride, citric acid and sodium bisulfate. A 1% catalyst level (solids on solids dispersion) is sufficient to achieve complete crosslinking of the polymer. Surfactants can also be added to VINNAPAS® EPN 865 to improve penetration of the binder into the substrate and improve absorbency of the finished product. Effective surfactant levels are 0.5 to 1.0% on dispersion solids. The compatibility and efficacy has to be checked undertaking a storage test.

### Polymer Dispersions

VINNAPAS® EPN 865 can be mixed with most of the VINNAPAS® dispersions and with many other aqueous polymer dispersions. However, the compatibility of the mixture should be tested by undertaking a storage test.

## Packaging and storage

### Storage

When the dispersion is stored in tanks, proper storage conditions must be maintained. VINNAPAS® EPN 865 has 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 VINNAPAS® EPN 865, 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 equipment and containers are not recommended because the dispersion is slightly acidic. Corrosion may result in discoloration of the dispersion or its blends when further processed. Therefore the use of containers and equipment made of ceramics, rubberized or enameled materials, appropriately finished stainless steel, or plastic (e.g. rigid PVC, polyethylene or polyester resins) is recommended. As polymer dispersion may tend to superficial film formation, skins or lumps may form during storage or transportation. Filtration is therefore recommended to utilization prior of the product.

### Preservation for Transport, Storage and further Processing

VINNAPAS® EPN 865 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 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 appropriate Material Safety Data Sheets. These are available on request from WACKER sales offices.

## QR Code VINNAPAS® EPN 865



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

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