

VINNAPAS® EP 7000



Polymer Dispersions

VINNAPAS® EP 7000 is a poly(vinyl alcohol) stabilized vinyl acetate-ethylene (VAE) copolymer dispersion with a glass transition temperature (T_g) of approximately $-3\text{ }^{\circ}\text{C}$. It was developed as a high performance, ultra-high solids dispersion offering superior adhesion, wet tack and setting speed over conventional VAE dispersions.

Properties

VINNAPAS® EP 7000 is manufactured to an ultra-high solids content of 70 percent while maintaining a viscosity range of 1200-2700 mPa.s. This combination of high solids and moderate viscosity allows formulators to prepare very unique high solids products. This dispersion provides excellent wet tack, speed of set, machining characteristics, film clarity and adhesion. The dry film of VINNAPAS® EP 7000 is tackier, clearer and more water resistant than standard grade VAE dispersions. VINNAPAS® EP 7000 does not thicken excessively on the addition of plasticizers, fillers or dispersible powders. Despite its high solids content, it can be applied on high-speed packaging machines using roll, extrusion or spray application equipment. VINNAPAS® EP 7000 is produced without the use of any surfactants or defoamers that contain alkylphenol ethoxylates (APEOs). No formaldehyde or formaldehyde donors are intentionally added.

Specific features

- Flexible
- Low formaldehyde content
- Produced without APEO

Technical data

Specification

| Property | Condition | Value | Method |
|--------------------|-----------|-------------------|-----------------|
| Solids content | - | 69.5 - 71.5 % | specific method |
| Viscosity, dynamic | 25 °C | 1200 - 2700 mPa·s | specific method |
| pH | - | 4.5 - 5.5 | specific method |
| Grit 100 Mesh | - | max. 50 ppm | specific method |

General Characteristics

| Property | Condition | Value | Method |
|------------------------------|-----------|------------------------|----------------------|
| Density | - | 1.05 g/cm ³ | specific method |
| Frost resistance | - | protect from freezing | specific method |
| Glass transition temperature | - | approx. -3 °C | DSC, specific method |
| Dry tack | - | slight tack | specific method |
| Film clarity | - | clear | specific method |
| Flexibility | - | excellent | specific method |
| Mechanical stability | - | excellent | specific method |
| Thickening response | - | moderate | specific method |
| Water resistance | - | very good | specific method |
| Wet tack | - | excellent | 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.

Protect against frost.

Applications

- Paper Packaging & Converting
- Film & Foil Converting
- Water-Based Caulks
- Film-to-Wood lamination

- Flooring Installation

Application details

VINNAPAS® EP 7000 can be compounded in a manner similar to other VAE dispersions. It is compatible with many types of plasticizers, thickeners and resins. With the addition of plasticizer <(>,<)> VINNAPAS® EP 7000 demonstrates a moderate thickening response. This moderate thickening response allows the compounder to add a plasticizer and dilute the formulation with very little water to a satisfactory running viscosity without losing the benefits of high solids. The addition of plasticizer significantly increases the water resistance of the dispersion, and further improves adhesion to low- energy surfaces. The moderate viscosity of VINNAPAS® EP 7000 enables it to be further compounded to increase the solids and the tack values. VINNAPAS® EP 7000 is compatible with many other poly(vinyl acetate) homopolymer, VAE and acrylic dispersions, epoxy resins and water-based urethane dispersions which adds to its versatility in formulating high performance adhesives and coatings.

VINNAPAS® EP 7000 can be used in numerous applications. For high-performance vinyl laminations, the product provides excellent adhesion, heat resistance and aesthetics with less warpage and reduced grain raise in wood-based substrates than standard solids dispersions. In clear film overprint laminations, VINNAPAS® EP 7000 dispersion yields excellent film clarity and water resistance. For construction applications, VINNAPAS® EP 7000 provides the high filler acceptance needed to produce high-solids adhesives. VINNAPAS® EP 7000 can also be used in bottle labeling, bookbinding, and high speed packaging applications where its rheology and very fast setting speeds and extremely high wet tack offer unique performance characteristics.

Packaging and storage

Storage

When VINNAPAS® EP 7000 is stored in tanks, proper storage conditions must be maintained. If stored in the original, unopened containers at cool (below 30 °C), but frost-free temperatures VINNAPAS® EP 7000 has a shelf life of 9 months from the date of manufacture. 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 resin) is recommended. As polymer dispersions may tend to superficial film formation, skins or lumps may form during storage or transportation. Filtration is therefore recommended prior to utilization of the product.

Preservation for Transport, Storage and further Processing

VINNAPAS® EP 7000 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. To maintain proper storage conditions appropriate measures should also be taken to ensure cleanliness of the tanks and pipes. In a storage tank in which VINNAPAS® EP 7000 is not stirred, it is advisable to contact your biocide representative/supplier. Proper procedures must be set up in order to prevent microbial attack between necessary periodic tank cleaning and sanitization. These procedures will vary, since loading and unloading practices in each storage situation will differ slightly. 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 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.

QR Code VINNAPAS® EP 7000



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

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