VINNAPAS® EP 7000

VINNAPAS®

Polymer Dispersions

VINNAPAS® EP 7000 is a poly(vinyl alcohol) stabilized vinyl acetate-ethylene (VAE) copolymer dispersion with a glass transition temperature (Tg) of approximately - 3 °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.

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 the dispersion 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 the product has a shelf life of 9 months from the date of manufacture. 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 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
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. 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 the product 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:

Wacker Chemie AG, Hanns-Seidel-Platz 4, 81737 Munich, Germany
info@wacker.com, www.wacker.com