VINNAPAS® EP 645

Polymer Dispersions

VINNAPAS® EP 645 is a specially modified vinyl acetate-ethylene (VAE) copolymer to offer excellent adhesion to a wide variety of difficult-to-bond substrates, the dispersion is poly (vinyl alcohol) stabilized for good wet tack, setting speed and excellent machinability.

Properties

VINNAPAS® EP 645 is produced without addition of plasticizers and can be used to produce adhesives that deliver bonding that remains permanently with flexibility and resistance to aging. VINNAPAS® EP 645 shows better adhesive and cohesive strength at elevated temperatures—a versatile balance that renders adhesives with very good heat resistance. And when plasticized, the heat resistance is less adversely affected than with other VINNAPAS® VAE copolymers. VINNAPAS® EP 645 also shows high water resistance.

Technical data

Specification

Property	Condition	Value	Method
Solids content	-	54 - 56 %	specific method
Viscosity, dynamic	25 °C	4000 - 9000 mPa·s	specific method
pH	-	4.0 - 6.0	specific method

General Characteristics

Property	Condition	Value	Method
Density	20 °C	approx. 1.07 g/cm^3	specific method
Minimum film forming temperature	-	0 °C	specific method
Frost resistance	-	protect from freezing	-
Protective colloid / emulsifier system	-	PVOH	-
Filler and pigment compatibility	-	excellent	specific method
Appearance of the dispersion film	-	clear, glossy	Visual
Surface of the dispersion film	-	tack free	specific method
Glass transition temperature	-	approx. 5 °C	specific method
Appearance	-	milky, white	visual check
Predominant particle size	-	approx. 1 µm	specific method

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

Applications

- 3D Lamination (Membrane Press)
- Film-to-Wood lamination
- Textile Lamination

Application details

Properties
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Application
The excellent flow properties and very high setting speed of VINNAPAS® EP 645 make it ideal as a co-blending dispersion for polyurethanes or other polymers in a variety of medium- to high-speed machine applications. Primary applications include synthetic leather market adhesive, between vinyl laminating and textile. VINNAPAS® EP 645 has been used successfully in synthetic leather adhesives for PVC sheet and textile or polyurethane sheet and textile, which benefits from its high cohesion strength.

Additional information

If the product is used in applications other than those mentioned, the choice, processing and use of the product is the sole responsibility of the purchaser. All legal and other regulations must be complied with.
For questions concerning food contact status according the chapter 21 CFR (US FDA) and German BfR, please feel free to contact us.
Wacker Chemie AG Hanns-Seidel-Platz 4 D-81737 München Germany

Packaging and storage

Packaging

- 200 Kg Steel drum
- 220 Kg Steel drum
- 1 MT IBC
- 1.1 MT IBC
- 1 MT Returnable tote
- Flexi bag.
- Tank lorry

Storage

When the dispersion is stored in tanks, proper storage conditions must be maintained. The product has a shelf life of 9 months starting from the date of manufacture 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 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. 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. If the product is stored for a longer period, stirring is recomended before use.
VINNAPAS® EP 645 shows high viscosity at temperatures below 15°C. Therefore, we recommend to use VINNAPAS® EP 645 at room temperature

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.

QR Code VINNAPAS® EP 645

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

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