

VINNAPAS[®] EP 6300



Polymer Dispersions

VINNAPAS[®] EP 6300 is a carboxylated, high solids vinyl acetate-ethylene (VAE) copolymer dispersion with a glass transition temperature (T_g) of 0 °C. It offers excellent adhesion to films and metals along with excellent cohesive film strength and is crosslinkable.

Properties

VINNAPAS[®] EP 6300 is a unique dispersion combining high solids with carboxyl functionality. The carboxylation provides crosslinking sites and causes the dispersion to thicken in the presence of alkalies. This dispersion exhibits high wet tack and excellent mechanical stability. It has lower plasticizer and solvent thickening response than conventional poly(vinyl alcohol) stabilized dispersions. The dried film exhibits excellent flexibility. The film exhibits slight dry tack, is heat sealable, and can be dissolved with water at a pH of approximately 9.5. VINNAPAS[®] EP 6300 is produced without the use of any surfactants or defoamers that contain alkylphenol ethoxylates (APEOs).

Technical data

Specification

Property	Condition	Value	Method
Solids content	-	62.0 - 64.0 %	specific method
Viscosity, dynamic	25 °C	600 - 1500 mPa-s	specific method
pH	-	4.3 - 5.3	specific method
Grit 100 Mesh	-	max. 50 ppm	specific method

General Characteristics

Property	Condition	Value	Method
Density	-	1.06 g/cm ³	specific method
Frost resistance	-	protect from freezing	specific method
Protective colloid / emulsifier system	-	PVOH and surfactant	-
Glass transition temperature	-	approx. 0 °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	-	low	specific method
Water resistance	-	moderate	specific method
Wet tack	-	high	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

- Ductliner Adhesives
- Film & Foil Converting

- Film-to-Wood lamination
- Paper Packaging & Converting

Application details

VINNAPAS® EP 6300 can accept common plasticizers that are typically used with VINNAPAS® 400. It will not thicken appreciably upon plasticizer addition, which helps the formulator maintain moderate viscosity at high solids where needed. To increase the viscosity, various alkalies or typical water-soluble polymers can be used. The alkali method is effective only to a pH of 6.5. If nonvolatile alkalies are used, adhesion may decrease because of their reaction with carboxyl groups. The dispersion will accept high loadings of clay, calcium carbonate, and other fillers. This dispersion can be compounded with fully hydrolyzed poly(vinyl alcohol) solutions to provide highly water-resistant films. The heat resistance can be enhanced with additional poly(vinyl alcohol). Water and heat resistance can also be improved with crosslinking through the carboxyl functionality. VINNAPAS® EP 6300 is an excellent base for adhesive formulators and can be used in a wide variety of applications. The ethylene in the polymer acts as an internal plasticizer which provides flexibility and reduces or eliminates the need for plasticizer in many applications. The carboxylation provides increased adhesion to metal surfaces such as aluminum, mild and galvanized steel, brass, lead, and tin plate. It also provides improved adhesion to metallized films and other films such as Mylar, cellulose acetate, PVC, and cloth. The films can be coated, dried, and heat sealed to a variety of surfaces. VINNAPAS® EP 6300 can be used in heat seal applications for metals foils and for plastic adherends.

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 6300



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

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

The data presented in this medium are in accordance with the present state of our knowledge but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this medium should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.