VINNAPAS® EP 6300

Product description
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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, 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 PVOH 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 demonstrates a low environmental impact design.

- It does not use any surfactants or defoamers that contain alkylphenol ethoxylates (APEOs).
- It is manufactured without the use of any formaldehyde donors.
- The total free residual vinyl acetate monomer content is less than 1000 ppm.

Application

VINNAPAS® EP 6300 dispersion 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 dispersion can be used in heat seal applications for metals foils and for plastic adherends.

Processing

VINNAPAS® EP 6300 dispersion 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 PVOH. Water and heat resistance can also be improved with crosslinking through the carboxyl functionality.

Storage

When VINNAPAS® EP 6300 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 VINNAPAS® EP 6300 dispersion has a shelf life of 6 months. 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.

Preservation for Transport, Storage and further Processing

VINNAPAS® EP 6300 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 piping. In a storage tank in which VINNAPAS® EP 6300 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.

Additional information

If VINNAPAS® EP 6300 is used in applications other than those mentioned, the choice, processing and use of VINNAPAS® EP 6300 is the sole responsibility of the purchaser. All legal and other regulations must be complied with.

For questions concerning food contact status according to chapter 21 CFR (US FDA) and German BfR, please contact:

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Safety notes

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER sales offices or may be printed via WACKER web site www.wacker.com/vinnapas.

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Specification data	Inspection Method	Value
Solids content	02CM170	62.0 - 64.0
Viscosity, Brookfield RVF#2 @20rpm, 25 °C	AM622	600 - 1500 mPa.s
pH-Value	AM631	4.3 – 5.3
VAM by Head Space GC	AM624	999 max.
Grit 100 Mesh	AM701	50 ppm max.

Typical general characteristics	Inspection Method	Value
Density	WACKER method	1,06 g/cm^3
Wet tack	WACKER method	High
Mechanical Stability	WACKER method	Excellent
Thickening Response	WACKER method	Low
Freeze/Thaw Stability	WACKER method	Protect from freezing
Glass transition temperature DSC	WACKER method	approx. 0 °C
Water Resistance	WACKER method	Very Good
Film Clarity	WACKER method	Clear
Dry Tack	WACKER method	Slight Tack
Flexibility	WACKER method	Excellent

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

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

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