

VINNAPAS® 320 KR (ULS)



Polymer Dispersions

VINNAPAS® 320 KR (ULS) is a vinyl acetate-ethylene copolymer designed to provide the formulator versatility in the compounding of water-resistant and high-speed packaging adhesives.

Properties

- Good adhesion to various plastic surfaces
- Permanently flexible adhesive joints
- High cohesion

Technical data

Specification

Property	Condition	Value	Method
Viscosity, dynamic	25 °C	1800 - 2700 mPa·s	specific method
pH	-	4.0 - 6.0	specific method
Solids content	-	55 - 57 wt. %	specific method

General Characteristics

Property	Condition	Value	Method
Residual monomer (vinyl acetate)	-	max. 0.1 %	GC
Density	20 °C	approx. 1.07 g/cm ³	specific method
Minimum film forming temperature	-	3 °C	specific method
Frost resistance	-	protect from freezing	-
Predominant particle size	-	approx. 1000 nm	specific method
Protective colloid / emulsifier system	-	PVOH	-
Filler and pigment compatibility	-	very good	specific method
Appearance of the dispersion film	-	clear, glossy	Visual
Surface of the dispersion film	-	none dry tack	specific method
Glass transition temperature	-	approx. 14 °C	specific method
Appearance	-	milky, white	Visual

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.

Applications

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

Application details

Properties

VINNAPAS® 320 KR (ULS) is compatible with both fully and partially hydrolyzed poly (vinyl alcohol) and will show no separation when formulated with any poly (vinyl alcohol) type. The dispersion has very good water resistance which can be improved by the addition of fully hydrolyzed poly (vinyl alcohol). When it is necessary to compound an easy-to-clean adhesive, partially hydrolyzed poly (vinyl alcohol) may be added. VINNAPAS® 320 KR (ULS) has strong wet tack and rapid setting speed. The dispersion also maintains its wet tack for an extended period of time, making it very useful in many packaging applications. Plasticizers will thicken VINNAPAS® 320 KR (ULS) as well as improve its water resistance and setting speed. The excellent wet tack of VINNAPAS® 320 KR (ULS) can be improved by the addition of tackified poly(vinyl alcohols) which will not separate when mixed with the dispersion. VINNAPAS® 320 KR (ULS) has excellent mechanical stability and does not thin excessively in high-shear applicators. The dried resin has excellent heat resistance. Also it is below 1000ppm residual monomer contented product.

Application

VINNAPAS® 320 KR (ULS) has excellent adhesion to a wide variety of packaging substrates including clay-coated paperboard, water-resistant craft paper and films. Its excellent mechanical stability, wet tack and rapid setting speed allow application by a variety of techniques including roll, spray and extrusion. It can be used in bookbinding, envelope back seams, padding, microwave applications, and craft glues. The excellent water resistance of VINNAPAS® 320 KR (ULS) makes it ideally suited for use in adhesives for cups, glue laps, composite cans, multiwall bags and beverage cartons. The dispersion can also be used to compound adhesives for bonding PVC to lauan plywood for decorative effects.

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.

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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 recommended before use.

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® 320 KR (ULS)



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

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