VINNAPAS® 460

Product description

VINNEPAS® 460 is a poly(vinyl alcohol) stabilized vinyl acetate-ethylene (VAE) copolymer dispersion with a glass transition temperature (T_g) of +5°C. It was developed as a low viscosity, high solids dispersion with the ability to accept high filler loading levels.

Properties

VINNEPAS® 460 dispersion has a unique combination of low viscosity and high solids which, together with its ability to accept high loadings of fillers, enables the manufacture of very high solids adhesives. In addition, VINNEPAS® 460 will not thicken appreciably with the addition of plasticizers. The dsipersion has very good adhesion to a wide variety of difficult-to-adhere substrates such as plastic films and coated papers. The dsipersion is mechanically shear stable which upon drying forms a clear, slightly tacky film.

The formaldehyde content of this dispersion is ultra low as it is manufactured with chemicals that do not generate formaldehyde. The total free residual vinyl acetate monomer content is less than 1,000 ppm.

Application

VINNEPAS® 460 dsipersion's high solids content and adhesion to plastic substrates make it especially useful in bonding films to paper and board stocks, where lower water content and formaldehyde-free adhesives are required. The very good adhesion to difficult-to-bond surfaces shown by the dsipersion is very useful in laminating films such as polstyrene, poly(ethylene terephthalate), poly(vinyl chloride) (PVC) and poly(vinyli-dene chloride.)

Processing

VINNEPAS® 460 can be compounded with plasticizers in a manner similar to VINNEPAS® 465 and VINNEPAS® 7200. It is compatible with other vinyl acetate-based polymers and acrylic polymers.

Storage

When VINNAPAS® 460 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® 460 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® 460 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® 460 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® 460 is used in applications other than those mentioned, the choice, processing and use of VINNAPAS® 460 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:

Wacker Chemie AG
Hanns-Seidel-Platz 4
D-81737 Munich
Germany

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.

Product data

Specification data	Inspection Method	Value
Solids content	WACKER method	62.5 – 64.0
Viscosity	WACKER method	200 – 800 mPa.s
pH-Value	WACKER method	6,0 – 7,5
VAM by Head Space GC	WACKER method	500 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. +5 °C
Water Resistance	WACKER method	Good
Film Clarity	WACKER method	Clear
Dry Tack	WACKER method	Slight Tack
Flexibility	WACKER method	Very Good

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:

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

www.wacker.com