

LATIN AMERICA | ADHESIVES | VINNAPAS® EP7000

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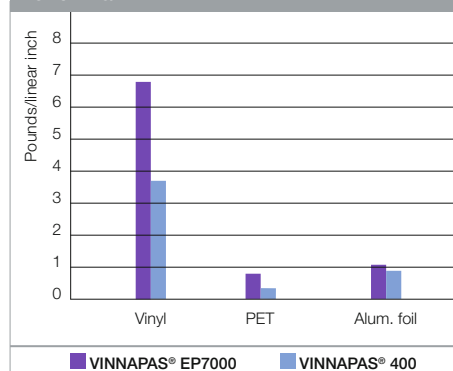
The Highest Solids VAE Available for Waterborne Adhesives

With VINNAPAS® EP7000, WACKER offers a high-solids binder for waterborne adhesives that provides superior adhesion, wet tack, and setting speed over conventional vinyl acetate-ethyl-ene (VAE) dispersions. Manufactured to an ultra-high solids content of 71% while maintaining a moderate viscosity range of 1,200 – 2,700 mPa.s, VINNAPAS® EP7000 allows formulators to prepare a very unique set of high-solids products.

VINNAPAS® EP7000 is Designed for Low Environmental Impact

VINNAPAS® EP7000 is manufactured without the intentional addition of any APEO-containing surfactants and de-foamers, as well as formaldehyde or formaldehyde donors. It also has a total free residual vinyl acetate monomer content of < 1,000 ppm.

Peel Adhesion of VINNAPAS® EP7000 Versus VINNAPAS® 400, an Established Benchmark



VINNAPAS® EP7000 Has a Unique Balance of Properties that Provide Performance in a Variety of Applications

Despite having ultra-high solids, VINNAPAS® EP7000 has a moderate viscosity and a relatively low viscosity response to the addition of plasticizers. This allows the formulator to develop high-solids adhesives with workable viscosities. VINNAPAS® EP7000 also has the unique balance of excellent machining, rapid setting speed, and strong wet tack with excellent adhesion, water resistance, and high filler acceptance. Based on this combination of properties, VINNAPAS® EP7000 can be used in a variety of applications from the more traditional paper and packaging adhesives to applications such as vinyl lamination, plastic bottle labeling, and construction and flooring applications.

Water Resistance of Various VINNAPAS® Dispersions

VINNAPAS® EP7000	Excellent
VINNAPAS® 323	High
VINNAPAS® 400/400H	Medium

Since VINNAPAS® EP7000 contains PVOH, addition of agents that will crosslink with PVOH (e.g. glyoxal, melamine-formaldehyde and urea-formaldehyde resins, or isocyanate prepolymers – both aliphatic and aromatic) can be added to produce high-performance, two-part adhesive systems. The crosslinking that occurs with

PVOH will improve elevated temperature creep resistance, heat resistance, peel adhesion, and water resistance. These types of crosslinked systems are ideal for high-performance vinyl laminating systems. The ideal amount of crosslinking agent is approximately 5% (higher levels, especially with isocyanate, do not yield higher levels of performance, but result in a shorter pot life).

Properties of VINNAPAS® EP7000

Solids (wt. %)	69.5 – 71.5
Viscosity (mPa.s)	1,200 – 2,700
pH	4.5 – 5.5
Tg (°C)	-6 – 0



VINNAPAS® Plus dispersions feature advanced properties for high-end formulations. Find out more at www.wacker.com/value-classes

At a Glance: VINNAPAS® EP7000 Benefits

- Ultra-high solids (highest of any commercial VAE currently available)
- Moderate viscosity with low plasticizer response for developing high-solids, moderate-viscosity adhesives
- Excellent adhesion
- Excellent water resistance
- Very fast setting speed
- Extremely high wet tack
- Very good machining characteristics
- Good film clarity
- Compatible with other latex dispersions, epoxy resins, and water-based urethane dispersions
- Suitable for high-solids, high-performance waterborne adhesives such as vinyl laminating, plastic bottle labeling, and construction and flooring applications



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