PRODUCT OVERVIEW VINNAPAS® DISPERSIONS

ADHESIVES & SEALANTS I POLYMER BINDERS I EUROPE







YOUR QUALITY CHOICE MADE EASY

Our VINNAPAS[®] dispersions are specially designed to address the continuously changing needs of the modern adhesives and sealants industry, offering up-to-date solutions for the latest end-user requirements and market trends.

VINNAPAS[®] dispersions set the industry benchmark in product quality, performance and reliability. With our product portfolio you benefit from:

- Consistently high quality
- 70 years' experience in vinyl acetate-based dispersion technology
- Properties such as adhesion, heat resistance, bonding to a wide range of different substrates, fast setting speed, high wet tack, reliable machinability, and broad formulation possibilities





For more information on the VINNAPAS[®] value classes, visit: www.wacker.com/value-classes

MAKE THE MOVE TO VINNAPAS® VAE: THE HIGH-PERFORMANCE SOLUTION

Success in the adhesives and sealants market often depends on choosing the right binder. VINNAPAS[®] vinyl acetate-ethylene (VAE) technology offers outstanding benefits in terms of performance, safety and versatility.

Vinyl acetate-ethylene (VAE) dispersions are copolymers produced by the emulsion polymerization of hard, polar vinyl acetate monomer and soft, hydrophobic ethylene monomer. Ethylene gives permanent flexibility to the VAE polymer. No external plasticizer is thus necessary in VAEs.



Diverse Applications

VINNAPAS[®] VAE dispersions can be formulated into adhesives and sealants for various applications:

- Paper & Packaging (e.g. food packaging, envelope manufacturing, film lamination onto paper)
- Wood (e.g. film lamination onto wood, 3D membrane pressing, EPI systems)
- Flooring (e.g. textile flooring, flexible coverings)
- Automotive (e.g. door paneling)
- PSAs (e.g. paper labels)
- Sealants (e.g. caulks, ventilation duct sealants)



For more information on VAE technology, visit: www.wacker.com/move

PRODUCT OVERVIEW

VINNAPAS® Product	Technical D	ata¹				Product Benefit	Performance	Attributes																	VINNAPAS [®] Product			
										Paper & Pacl	kaging					Wood to Wo	bod		Filr	n to Wood		Flooring	g	Caulks & Seala	nts	PSA	Automotive	e
	Base Polymer ²	Solids Content (DIN EN ISO 325 (± 1%)	Viscosity BF 20 2) at 23 °C at 20 rpm [mPa s] (ISO 2555)	рН (ISO 976)	Glass Transition Temperature Midpoint [°C] (approx.)	Minimum Film-Forming Temperature (MFFT) (DIN ISO 2115) [°C] (approx.)	g Film Surface	Stabilizing System ^{3,4}		Adhesion (for e.g. film to pa	Cohesion / aper) Heat Resistance	Setting Rolle e Behavior Appli	r / Wheel Nozzle ication Applicat	Cleanabili ion	ty Water Resistance	D3 (EN 204) e [N/mm²]	D4 (EN 204) Watt 91 [N/mm²] [N/mm²] (approx.	(EN 204) Low Wood] Discoloration .)	Setting Adh Behavior	esion Water Resistanc	Heat Setting Resistance Behavior	Workabili	ty Overall Heat Setting Adhesion Resistance Behavio	Filler Water r Acceptance Resista	Flexibility Workability nce	Tack Shear Adhesion Resistance	Suitability	
VINNAPAS [®] Products VAE Te	chnology (Copolyme	ers and Terpolymers)																							٧	INNAPAS [®] Products VAE T	chnology (Co	opolymers and Terpolymers)
VINNAPAS® EAF 67	VAc-E-A	60 ± 2	$7,000 \pm 2,500$	4 – 5	-35	0	Tacky	ST	Low T_{g} grade for flooring adhesives or PSA applications.	•••	•	• •	•	•	•				• •	• •	• ••	•••	••• •• •••	•		••• •• •••	•••	VINNAPAS® EAF 67
VINNAPAS® EAF 68	VAc-E-A	58 – 61	$7,000 \pm 2,500$	4 – 5	-35	0	Tacky	ST	Low $\mathrm{T_g}$ grade for flooring adhesives with excellent dimensional stability.	•••	•	• •	•	•	•				• •	• •	• ••	•••	••• ••			•• ••• ••	•••	VINNAPAS® EAF 68
VINNAPAS [®] EF 8860	VAc-E	57	1,500 ± 1,000	4 – 5	-10	0	Slightly tacky	st St	Medium-soft binder for flooring adhesives with good plasticizer resistance and high cohesion.	••	•	• •	•	•	•				• (• •	• ••	•••	•• ••• •					VINNAPAS® EF 8860
VINNAPAS [®] EP 1	VAc-E	50	$9,000 \pm 3,000$	4 – 5	1	0	Slightly tacky	PVOH / ST	Good compatibility with PUD.	••	••	•• ••	• •		••				•	••	•• ••	•	•• •• •					VINNAPAS [®] EP 1
VINNAPAS [®] EP 11	VAc-E	50	$5,000 \pm 1,000$	4 – 5	3	0	Slightly tacky	PVOH	Specially designed for cigarette / tipping applications.	••	••	•• ••	• •		••				•	••	•• ••	•	•• ••• •				••	VINNAPAS® EP 11
VINNAPAS [®] EP 14	VAc-E	55	$5,500 \pm 1,500$	4 – 5	3	0	Slightly tacky	PVOH	Universal binder for paper & packaging applications / film-to-wood lamination	on. ●●	••		• •		••				•	••	•• ••	•	•• ••• •					VINNAPAS [®] EP 14
VINNAPAS [®] EP 17	VAc-E	60	$3,800 \pm 1,000$	4 – 5	3	0	Slightly tacky	PVOH / ST	Good compatibility with PUD, also recommended for automotive applications	IS. ●●	••	•• ••	•	•	•				•	•	•• ••	•	•• ••• •					VINNAPAS [®] EP 17
VINNAPAS [®] EP 24	VAc-E	57	12,000 ± 3,000	4 – 5	3	0	Slightly tacky	PVOH	Universal binder for paper & packaging applications / film-to-wood lamination High viscosity.	on. ●●	••	•• ••	• ••	•••	••				•	••	•• ••	•	•• ••• •					VINNAPAS® EP 24
VINNAPAS [®] EP 400	VAc-E	55	$2,400 \pm 400$	4 - 5	5	0	Slightly tacky	PVOH	Universal binder for paper & packaging applications / film-to-wood lamination	on. ●●	••	•• ••	• ••	•••	•				•	•	•• ••	•	•• ••• •					VINNAPAS [®] EP 400
VINNAPAS® EP 400 E	VAc-E	55	$2,400 \pm 400$	4 – 5	5	0	Slightly tacky	PVOH	Low formaldehyde content/universal binder for paper & packaging applica- tions / film-to-wood lamination.	••	••	•• ••	• ••	•••	•				•	•	•• ••	•	•• ••• •					VINNAPAS® EP 400 E
VINNAPAS® EP 401	VAc-E	55	$2,500 \pm 800$	4 – 5	-7	0	Slightly tacky	PVOH	Universal binder for paper & packaging applications / film-to-wood lamination Higher adhesion level compared to VINNAPAS® EP 400.	on. ●●●	••	••• ••	• •••	•••	•				• •	•	•• ••	•	•• ••• •					VINNAPAS® EP 401
VINNAPAS [®] EP 441	VAc-E	55 ± 2	4,000 ± 1,000	4 – 5	5	0	Slightly tacky	PVOH	Universal binder for paper & packaging applications / film-to-wood lamination Especially suitable for nozzle (HHS) applications.	on. ●●	••	•• ••	• •••	•••	•				•	•	•• ••	•	•• ••• •					VINNAPAS [®] EP 441
VINNAPAS® EP 8010	VAc-E	58 – 61	6,000 ± 2,000	4 – 5	-10	0	Slightly tacky	PVOH / ST	Excellent adhesion to various difficult-to-bond surfaces, also recommended for automotive applications.	•••	••	••• ••	•	•••	••				•	• ••	•• ••	•	••• •• •				•••	VINNAPAS® EP 8010
VINNAPAS [®] EPN 865	VAc-E	56	$2,500 \pm 1,500$	4 – 5	20	6	Slightly tacky	PVOH	Higher T_g , functional monomers for crosslinking under heat.	•	•••	•• ••	• •	$\bullet \bullet \bullet$	•				•	•	••• ••	•	• ••• •					VINNAPAS® EPN 865
VINNAPAS® EAF 7868	VAc-E-A	60 ± 2	$7,000 \pm 3,000$	4 – 5	-35	0	Tacky	ST	Low $\mathrm{T_g}$ binder, specially designed for sealant formulations without plasticizer.															••• •	••• •••			VINNAPAS® EAF 7868 📑
VINNAPAS [®] EF 7865	VAc-E	57	$1,750 \pm 1,250$	4 – 5	-10	0	Slightly tacky	ST	Medium-soft binder, specially designed for sealant formulations.															•••	•• •••			VINNAPAS [®] EF 7865
VINNAPAS® EF 7877	VAc-E	56	$1,000 \pm 850$	3.5 – 5.5	10	1	Tack-free	ST	Medium-hard binder, specially designed for sealant formulations.															••• •	• •••			VINNAPAS [®] EF 7877
VINNAPAS® EP 7860	VAc-E	60	$4,500 \pm 1,500$	4 - 6	10	2	Tack-free	PVOH / ST	Medium-hard binder, specially designed for sealant formulations.															••••	• •••			VINNAPAS® EP 7860
VINNAPAS [®] Products PVAc T	echnology																										VINNAPAS®	[®] Products PVAc Technology
VINNAPAS® DP 55	VAc	55 ± 2	$3,000 \pm 1,500$	4 – 5	33	14	Tack-free	PVOH	Low-viscosity PVOH-stabilized homopolymer.	•	•••	•• ••	•	$\bullet \bullet \bullet$	•	No	No 5	•••	••• •	•	••• ••							VINNAPAS® DP 55
VINNAPAS® DP 500	VAc	50 ± 2	$35,000 \pm 5,000$	4.5 - 5.5	33	14	Tack-free	PVOH	Very low sedimentation, excellent plasticizer response.	•	•••	•• ••	•	$\bullet \bullet \bullet$	•	No	No 5	•••	••• •	•	•••							VINNAPAS® DP 500
VINNAPAS® DP 600	VAc	60 ± 2	$35,000 \pm 6,000$	4 - 5.5	33	14	Tack-free	PVOH	Very low sedimentation, excellent plasticizer response.	•	•••	•• ••	•	$\bullet \bullet \bullet$	•	No	No 5	•••	••• •	•	•••							VINNAPAS® DP 600
VINNAPAS® DPN 15	VAc	52	$15,000 \pm 3,000$	2.5 – 3.5	28	5	Tack-free	PVOH	D3 1C wood adhesive.							> 3	No > 7	•	•••									VINNAPAS® DPN 15
VINNAPAS® DPN 16	VAc	52 ± 2	$12,000 \pm 2,000$	2.5 – 3.5	28	5	Tack-free	PVOH	D3 1C wood adhesive, reduced discoloration.							> 3	No > 7	••	•••									VINNAPAS® DPN 16
VINNAPAS® DPN 17	VAc	48	$11,000 \pm 2,000$	2.5 – 3.5	28	4	Tack-free	PVOH	D3 1C wood adhesive, longer open time.							> 3	No > 7	•	•••									VINNAPAS® DPN 17
VINNAPAS® DPN 47	VAc	50 ± 2	$18,000 \pm 4,000$	4.5 – 5.5	19	3	Tack-free	PVOH	D4 2C wood adhesive.							> 4	> 4 > 7	•	•••									VINNAPAS® DPN 47
VINNAPAS® DPX 271	VAc	46 ± 2	$10,000 \pm 4,000$	5 - 6	30	5	Tack-free	PVOH	D3 1C wood adhesive, low formaldehyde, discoloration-free.	•	•••	•• •	٠	••	••	> 3	No 5	•••	••• •	••	••• ••							VINNAPAS® DPX 271
VINNAPAS® H 65	VAc	65	$30,000 \pm 10,000$	5 - 6	40	14	Tack-free	PVOH	PVOH-stabilized homopolymer with outstanding setting speed.	•	•••	••• ••	•	•••	•	No	No 5	•••	••• •	•	••• ••							VINNAPAS® H 65
VINNAPAS® M 50/300	VAc	50	$1,000 \pm 300$	4 – 5	35	14	Tack-free	PVOH	Low-viscosity PVOH-stabilized homopolymer.	•	•••	•• ••	•	•••	•	No	No 5	•••	••• •	•	••• ••							VINNAPAS® M 50/300
1 These figures are 2 VAc = intended as a guide A =	Vinyl acetate 3 F Acrylic ester 5	PVOH = Polyvinyl alcohol ST = Surfactant	Legend for performance attributes									1 The	ese figures are	2 VAc = V A = A	/inyl acetate	3 PVOH = P ST = S	Polyvinyl alcohol	Legend for performance a	ettributes									

only and should not E = Ethylene be used in preparing specifications.

4 All products produced without the use of APEO surfactants

be used in preparing specifications.

only and should not E = Ethylene 4 All products produced without the use of APEO surfactants

•• High •





Wacker Chemie AG Hanns-Seidel-Platz 4 81737 München, Germany Tel. +49 89 6279-1741 info@wacker.com

www.wacker.com www.wacker.com/move-adhesives

www.wacker.com/socialmedia



□ in □ ¥

The data presented in this brochure 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 brochure 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.