

WACKER

CREATING TOMORROW'S SOLUTIONS

VINNAPAS®

CONSTRUCTION | POLYMER POWDERS | CIS

**PRODUCT OVERVIEW
VINNAPAS® DISPERSIBLE
POLYMER POWDERS**



POLYMER CHEMISTRY – A KEY TO QUALITY

Polymer binders enhance two critical characteristics of all mortars and coatings: adhesion and flexibility. They ensure the quality and prolong the life expectancy of buildings while reducing material consumption and increasing creative freedom by making it possible to combine a wide variety of construction materials.

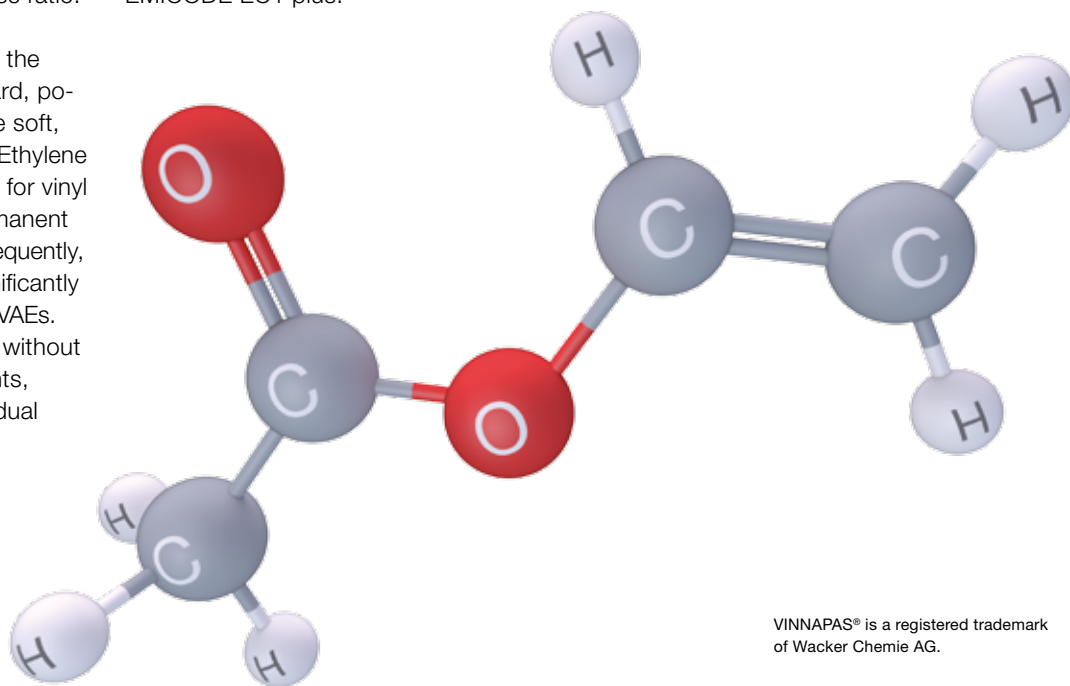
Vinyl Acetate-Ethylene (VAE) – Serving the Megatrends of Today and Tomorrow

VINNAPAS® dispersions are co- and terpolymers based on vinyl acetate, ethylene and other monomers. Vinyl acetate-ethylene (VAE), in particular, combines technical performance with environmental benefits at an attractive cost-in-use ratio.

VAE dispersions are produced by the emulsion polymerization of the hard, polar monomer vinyl acetate and the soft, hydrophobic monomer ethylene. Ethylene functions as an optimal flexibilizer for vinyl acetate, which incorporating permanent flexibility into VAE polymers. Consequently, the use of plasticizers can be significantly minimized when formulating with VAEs. In addition, all grades are stabilized without the use of APEO-based surfactants, many of them also show low residual monomer content (<500 ppm).

Compliance with Strict Labels

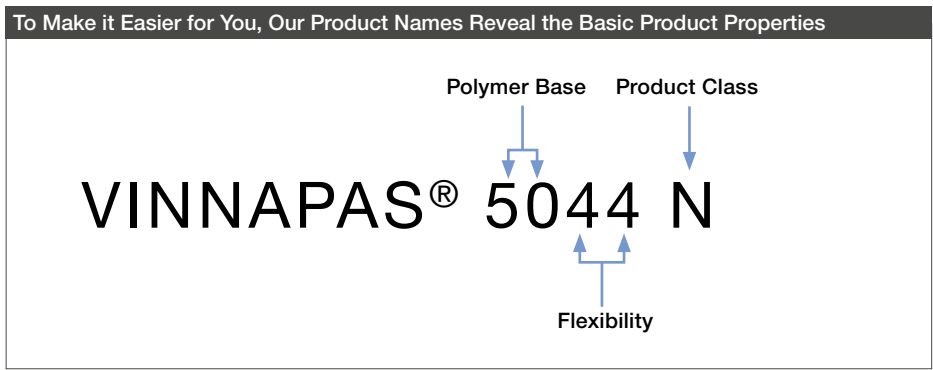
With our cutting-edge VINNAPAS® VAE binders, the construction and paints industries are equipped to meet stringent governmental regulations, as well as the requirements of internationally recognized ecolabels and certifications, such as Blue Angel, Green Seal GS-11, TÜV Süd, and EMICODE EC1 plus.



VINNAPAS® is a registered trademark
of Wacker Chemie AG.

FIND THE RIGHT GRADE EASILY

Our portfolio of VINNAPAS® dispersible polymer powders has been developed and optimized over the course of 55 years to offer you the perfect fit for your application, whether for today's or tomorrow's needs. To make it easier for you to choose the ideal product, we have divided our portfolio into product classes.



Polymer Base	
10 – 14	VAc
15 – 19	A
20 – 29	S-A
30 – 39	VC-E
40 – 49	VAc-E
50 – 59	VAc-E
60 – 69	VAc-others
70 – 79	VAc-E-others
80 – 89	VC-E-others

Flexibility	
00 – 09	Very hard
10 – 19	Hard
20 – 29	Semi-flexible
30 – 39	Flexible
40 – 49	Very flexible
50 – 59	Highly flexible

A = acrylate, E = ethylene, S = styrene,
VAc = vinyl acetate, VC = vinyl chloride
MMA = methyl methacrylate

N = VINNAPAS® N Class – Neutral Effect on Rheology

These products provide a high degree of freedom in developing formulations and are ideal for various applications.

E = VINNAPAS® E Class – Enhanced Properties

These products have enhanced properties in a number of applications and improve essential characteristics. They ensure improved workability, increased adhesion or water resistance, to name just a few.

T = VINNAPAS® T Class – Thixotropic Expertise

These products are used in thixotropic tile adhesives and in troweling compounds.

L = VINNAPAS® L Class – Leveling Optimization

These products create smooth surfaces by displaying excellent leveling properties. They are therefore ideal for self-leveling compounds.

F = VINNAPAS® F Class – Flow Superiority

These products provide excellent flow properties without the need for any additional synthetic superplasticizers or casein. They are therefore ideal for self-leveling compounds that require an instant liquefying effect and a special rheology.

H = VINNAPAS® H Class – Hydrophobic Excellence

These products have remarkable hydrophobic properties, making them ideal for all types of plasters and tile grouts as well as for ETICS (external thermal insulation composite systems).

THE FAST TRACK – PRODUCT FINDER

Grade	Typical General Properties			Recommended Applications*
	Polymer Base	Flexibility	MFFT (ISO 2115) [°C]	
Neutral				
VINNAPAS® 4023 N	VAc-E	Semi-flexible	1	Tile adhesives , wall and joint fillers
VINNAPAS® 4121 N ¹	VAc-E	Semi-flexible	1	ETICS , CTA C1
VINNAPAS® 5005 N ¹	VAc	Hard	4	Wall and joint fillers , tile adhesives, tile grouts, renders/plasters
VINNAPAS® 5010 N	VAc-E	Hard	4	Tile adhesives, tile grouts, renders and plasters, wall and joint fillers
VINNAPAS® 5043 N	VAc-E	Very flexible	0	ETICS
VINNAPAS® 5044 N	VAc-E	Very flexible	0	ETICS, waterproofing membranes, concrete repair , wall and joint fillers
Enhanced				
VINNAPAS® 5028 E	VAc-E	Semi-flexible	4	Tile adhesives
VINNAPAS® 7034 E	VAc-E-others	Flexible	0	Renders and plasters, concrete repair , tile adhesives, tile grouts, ETICS, wall and joint fillers
VINNAPAS® 7055 E	VAc-E-others	Highly flexible	0	Waterproofing membranes , ETICS, concrete repair
VINNAPAS® 7210 E	VAc-E-others	Hard	7	Tile adhesives , tile grouts
VINNAPAS® 7220 E	VAc-E-others	Semi-flexible	5	Tile adhesives , tile grouts, renders and plasters
VINNAPAS® 8620 E ¹	VAc-VC-E	Semi-flexible	3	Tile adhesives , tile grouts
Hydrophobic				
VINNAPAS® 4042 H	VAc-E	Very flexible	0	ETICS, waterproofing membranes , renders and plasters
VINNAPAS® 5048 H	VAc-E	Very flexible	0	ETICS, renders and plasters, waterproofing membranes
VINNAPAS® 8031 H	VC-E-others	Flexible	0	Tile grouts , renders and plasters, waterproofing membranes
VINNAPAS® 8034 H	VC-E-others	Flexible	0	Tile grouts, renders and plasters , waterproofing membranes, ETICS
Thixotropic				
VINNAPAS® 5012 T	VAc-E	Hard	4	Tile adhesives, wall and joint fillers
VINNAPAS® 5021 T	VAc-E	Semi-flexible	4	Tile adhesives, wall and joint fillers
VINNAPAS® 5046 T	VAc-E	Very flexible	0	Wall and joint fillers , ETICS
Leveling				
VINNAPAS® 4220 L	VAc-E	Semi-flexible	1	Self-leveling compounds
VINNAPAS® 4410 L	VAc-E	Hard	4	Self-leveling compounds
VINNAPAS® 5023 L	VAc-E	Semi-flexible	4	Self-leveling compounds
VINNAPAS® 5111 L	VAc-E	Hard	4	Self-leveling compounds
VINNAPAS® 5222 L	VAc-E	Semi-flexible	4	Self-leveling compounds
Flow				
VINNAPAS® 5014 F	VAc-E	Hard	4	Self-leveling compounds
VINNAPAS® 7016 F	VAc-E-MMA	Hard	7	Self-leveling compounds

¹ This product is in the scale-up phase. Please contact your sales representative.

A = acrylate
E = ethylene
S = styrene
VAc = vinyl acetate
VC = vinyl chloride
MMA = methyl methacrylate

*Highly recommended
Recommended

THE PERFECT FIT – RECOMMENDATION BY APPLICATION

Tile Adhesives

Grade	Product Benefit	Performance Attributes		
		Tensile Adhesion Strength after Open Time (EN 1346)	Tensile Adhesion Strength after Heat Aging (EN 1348)	Tensile Adhesion Strength after Water Immersion (EN 1348)
Neutral				
VINNAPAS® 4023 N	Good tensile adhesion strength on inorganic surfaces even after water immersion.	▲ ▲	▲ ▲	▲ ▲
VINNAPAS® 5010 N	Very good tensile adhesion strength on inorganic surfaces especially after heat aging.	▲ ▲	▲ ▲ ▲	▲
Enhanced				
VINNAPAS® 5028 E	Long open time and good tensile adhesion strength after water immersion.	▲ ▲ ▲	▲ ▲	▲ ▲
VINNAPAS® 7210 E	Long open time and very good tensile adhesion strength after water immersion and heat aging.	▲ ▲ ▲	▲ ▲ ▲	▲ ▲
VINNAPAS® 7220 E	Very good workability and excellent tensile adhesion strength after water immersion.	▲ ▲	▲ ▲ ▲	▲ ▲ ▲
VINNAPAS® 8620 E	Long open time and excellent tensile adhesion strength after water immersion.	▲ ▲ ▲	▲ ▲	▲ ▲ ▲
Thixotropic				
VINNAPAS® 5012 T	Very good tensile adhesion strength after standard conditions.	▲ ▲	▲ ▲ ▲	▲
VINNAPAS® 5021 T	Long open time and good tensile adhesion strength especially after water immersion.	▲ ▲ ▲	▲ ▲	▲ ▲

Tile Grouts

Grade	Product Benefit	Performance Attributes		
		Hydrophobic Effect	Workability	Cleaning Properties after First Setting
Neutral				
VINNAPAS® 5010 N	Very good workability and very good cleaning properties after first setting.	---	▲ ▲ ▲	▲ ▲ ▲
Hydrophobic				
VINNAPAS® 8031 H	Slight hydrophobic effect, good workability and low stickiness.	▲	▲	▲ ▲
VINNAPAS® 8034 H	Strong hydrophobic effect, good workability and low stickiness.	▲ ▲	▲	▲ ▲

Based on WACKER guide formulations.

▲ ▲ ▲ Excellent ▲ ▲ Very Good ▲ Good --- Neutral

Self-Leveling Compounds

Grade	Product Benefit	Performance Attributes		
		Flow Support	Defoaming	Stabilization
Leveling				
VINNAPAS® 4220 L	Basic leveling and defoaming for low-VOC products.	▲▲	▲	▲▲
VINNAPAS® 4410 L	Excellent defoaming properties for very smooth, flat surfaces and good stabilization against water over-dosage.	▲▲	▲▲▲	▲▲▲
VINNAPAS® 5023 L	Good defoaming properties for smooth surfaces and specifically recommended for end products with melamine sulfates.	▲▲	▲	▲▲
VINNAPAS® 5111 L	Very good defoaming properties at low viscosity for very smooth, flat surfaces for end products with very low emissions.	▲▲▲	▲▲	▲
VINNAPAS® 5222 L	Very good defoaming properties at low viscosity for smooth, flat surfaces.	▲▲▲	▲▲	▲
Flow				
VINNAPAS® 5014 F	Instant plasticizing effect especially for pumpable systems with shear-thinning rheology.	▲▲▲	▲	▲
VINNAPAS® 7016 F	Instant plasticizing effect with casein-like rheology and very good self-healing effect especially for manually applied systems.	▲▲▲	▲	▲▲

Wall and Joint Fillers

Grade	Product Benefit	Performance Attributes		
		Hydrophobicity	Thixotropy	Workability
Neutral				
VINNAPAS® 5005 N	Good tensile adhesion strength and good workability.	---	---	▲▲
VINNAPAS® 5010 N	Very good tensile adhesion strength on all surfaces and good workability.	---	---	▲▲
Thixotropic				
VINNAPAS® 5012 T	Thixotropic, very good workability and very good tensile adhesion strength.	---	▲▲	▲▲▲
VINNAPAS® 5021 T	Thixotropic, very good workability, long open time and good tensile adhesion strength.	---	▲▲	▲▲▲
VINNAPAS® 5046 T	Strongly thixotropic, very good workability.	---	▲▲▲	▲▲▲

Concrete Repair

Grade	Product Benefit
Neutral	
VINNAPAS® 5044 N	Very good tensile adhesion strength on all surfaces.
Enhanced	
VINNAPAS® 7034 E	Excellent workability and good tensile adhesion strength on all surfaces.

Based on WACKER guide formulations.

▲▲▲ Excellent ▲▲ Very Good ▲ Good --- Neutral

ETICS

Grade	Product Benefit	Performance Attributes		
		Tensile Adhesion Strength	Impact Resistance	Hydrophobicity
Neutral				
VINNAPAS® 4121 N	Very good tensile adhesion strength particularly on organic surfaces, good impact strength and good workability.	▲▲▲	▲▲	---
VINNAPAS® 5043 N	Very good tensile adhesion strength particularly on organic surfaces, very high impact strength and good workability.	▲▲▲	▲▲▲	---
VINNAPAS® 5044 N	Very good tensile adhesion strength particularly on organic surfaces, very high impact strength and very good workability – versatile use in all ETICS formulations.	▲▲▲	▲▲▲	---
Hydrophobic				
VINNAPAS® 4042 H	Slight hydrophobic effect, very good tensile adhesion strength particularly on organic surfaces and very high impact strength.	▲▲▲	▲▲▲	▲▲
VINNAPAS® 5048 H	Strong hydrophobic effect, very good tensile adhesion strength particularly on organic surfaces and very high impact strength.	▲▲▲	▲▲▲	▲▲▲

Waterproofing Membranes

Grade	Product Benefit	Adhesion on Critical (especially Organic) Surfaces
Neutral		
VINNAPAS® 5044 N	Very good tensile adhesion strength on all surfaces and good crack-bridging properties.	▲▲▲
Enhanced		
VINNAPAS® 7055 E	Very good tensile adhesion strength particularly on all surfaces and very good crack-bridging properties even at low temperatures.	▲▲▲
Hydrophobic		
VINNAPAS® 4042 H	Slight hydrophobic effect and very good tensile adhesion strength.	▲▲▲
VINNAPAS® 5048 H	Very strong hydrophobic effect and very good tensile adhesion strength.	▲▲▲

Renders and Plasters

Grade	Product Benefit	Tensile Adhesion Strength	Hydrophobicity
Neutral			
VINNAPAS® 5010 N	Very good tensile adhesion strength on inorganic surfaces and good workability.	▲▲▲	---
Enhanced			
VINNAPAS® 7034 E	Excellent workability and very good tensile adhesion strength.	▲▲▲	▲
Hydrophobic			
VINNAPAS® 5048 H	Strong hydrophobic effect and very good tensile adhesion strength.	▲▲▲	▲▲▲
VINNAPAS® 8034 H	Strong hydrophobic effect, good workability and very good tensile adhesion strength.	▲▲▲	▲▲▲

Based on WACKER guide formulations.

▲▲▲▲ Excellent ▲▲▲ Very Good ▲ Good --- Neutral

WACKER

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