

WACKER

CREATING TOMORROW'S SOLUTIONS

VINNAPAS®

PRIMIS®

CONSTRUCTION AND PAINTS | POLYMER DISPERSIONS | WESTERN EUROPE

PRODUCT OVERVIEW POLYMER DISPERSIONS



POLYMER CHEMISTRY – A KEY TO QUALITY

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

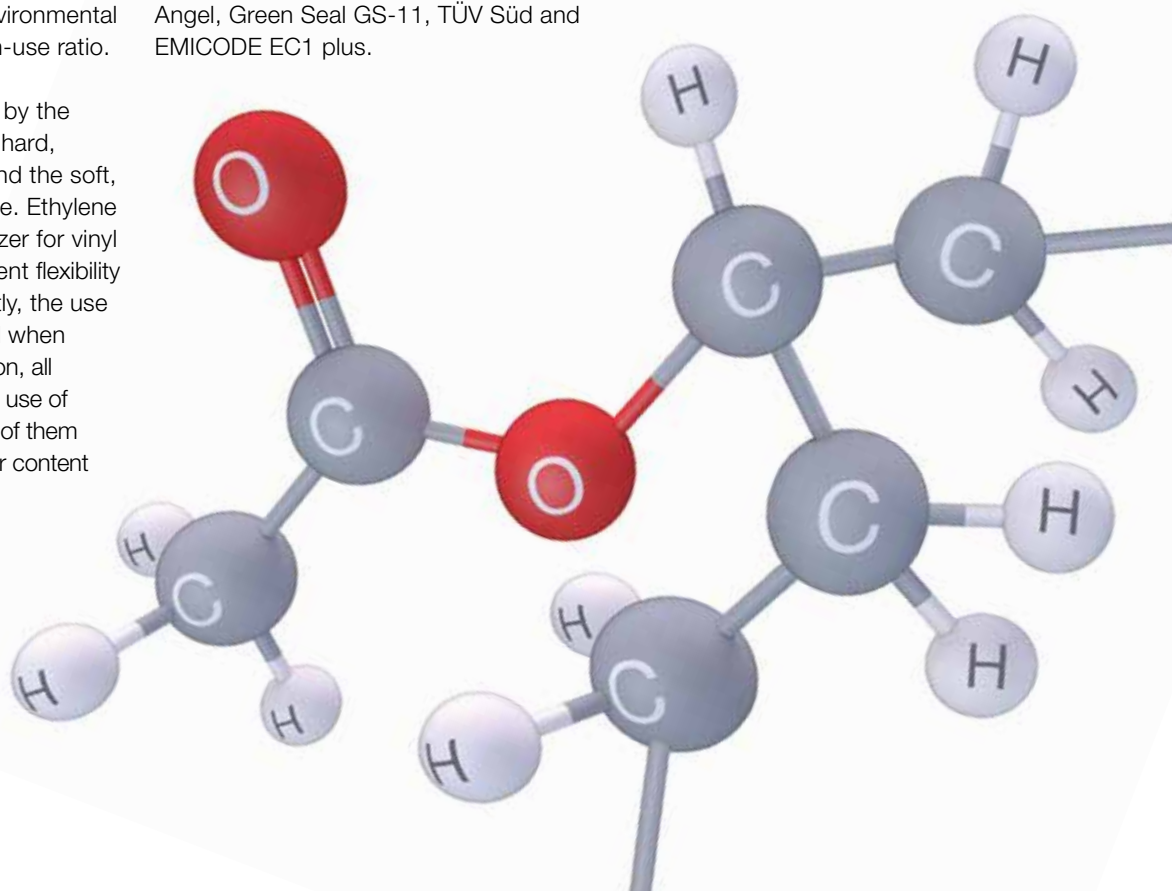
Vinyl Acetate-Ethylene (VAE) – Serving the Megatrends of Today and Tomorrow

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, incorporating permanent flexibility into VAE polymers. Consequently, the use of plasticizers can be 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 paint 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.



THE FAST TRACK – PRODUCT FINDER

| Grade | Typical General Properties ¹ | | | | | | | | |
|--------------------|---|-------------------------------------|-------------------------------|-----------|---|---|---|---|-----------------------------------|
| | Polymer Base ² | Solids Content ±1% ³ [%] | Viscosity, Brookfield [mPa·s] | pH Value | Glass Transition Temperature T _g (DSC) ⁵ [°C] | Minimum Film-Forming Temperature [°C] (ISO 2115) ⁵ | Predominant Particle Size ⁵ [µm] | Ability to Formulate Solvent and Plasticizer-Free | Stabilization System ⁴ |
| VINNAPAS® 530 ND | VAc-E | 55 | 2,000–2,800 | 4.0–5.0 | 6 | 0 | 1.0 | Yes | PVOH |
| VINNAPAS® 550 ED | VAc-E | 53 | 100–400 | 3.0–4.5 | -5 | 0 | 0.9 | Yes | PVOH |
| VINNAPAS® EF 3777 | VAc-E | 56 | 150–1,850 | 3.5–5.5 | 10 | 1 | 0.2 | Yes | ST |
| VINNAPAS® EP 16 | VAc-E | 50 | 6,000–12,000 | 4.0–5.0 | 1 | 0 | 1.0 | Yes | PVOH & ST |
| VINNAPAS® EP 64 | VAc-E | 55 | 2,000–2,800 | 4.0–5.0 | 6 | 0 | 1.0 | Yes | PVOH |
| VINNAPAS® EP 523 | VAc-E | 60 | 3,000–6,000 | 4.0–6.0 | 10 | 2 | 0.3 | Yes | PVOH & ST |
| VINNAPAS® EP 3455 | VAc-E | 55 | 1,000–3,000 | 4.0–6.0 | 8 | 0 | 0.3 | Yes | PVOH & ST |
| VINNAPAS® EP 3360 | VAc-E | 60 | 3,000–6,000 | 4.0–6.0 | 10 | 2 | 0.3 | Yes | PVOH & ST |
| VINNAPAS® EP 3560 | VAc-E | 60 | 3,000–6,000 | 4.0–6.0 | 10 | 2 | 0.3 | Yes | PVOH & ST |
| VINNAPAS® EZ 3011 | VAc-E | 55 | 2,700–5,900 | 4.5–5.5 | 7 | 0 | 0.4 | Yes | CD & ST |
| VINNAPAS® EZ 3067 | VAc-E | 55 | 2,000–7,000 | 4.5–5.5 | 6 | 1 | 0.3 | Yes | CD & ST |
| VINNAPAS® EAF 380 | VAc-E-A | 51 | 600–1,600 | 7.0–9.0 | 12 | 8 | 0.3 | Yes | ST |
| VINNAPAS® EAF 730 | VAc-E-A | 53 | 1,000–6,000 | 7.5–8.5 | 3 | 3 | 0.2 | Yes | ST |
| VINNAPAS® CEZ 3031 | VAc-E-VC | 50 | 6,000–12,000 | 4.0–5.0 | 7 | 2 | 0.7 | Yes | CD & ST |
| VINNAPAS® EZ 3019 | VAc-E-VE | 50 | 2,100–3,900 | 4.5–5.5 | 2 | 2 | 0.3 | Yes | CD & ST |
| VINNAPAS® EZ 3112 | VAc-E-VE | 50 | 1,800–4,000 | 4.5–5.5 | 3 | 0 | 0.4 | Yes | CD & ST |
| VINNAPAS® 825 ED | VC-E-VAc | 50 | 1,500–3,500 | 4.5–7.5 | 10 | 7 | 0.8 | No | PVOH |
| VINNAPAS® 822 HD | VC-E-VE | 60 | 3,000–8,000 | 7.0–9.0 | 14 | 7 | 0.3 | No | ST |
| VINNAPAS® CEF 52 | VC-E-VE | 60 | 3,000–8,000 | 7.0–9.0 | 14 | 7 | 0.3 | No | ST |
| VINNAPAS® 202 HD | S-A | 50 | 1,500–3,500 | 7.5–8.3 | 18 | 23 | 0.1 | No | ST |
| VINNAPAS® 224 HD | S-A | 50 | 6,000–12,000 | 7.5–8.5 | 20 | 12 | 0.1 | No | ST |
| VINNAPAS® 240 HD | S-A | 50 | 700–3,000 | 7.0–8.0 | 0 | 0 | 0.1 | Yes | ST |
| VINNAPAS® SAF 34 | S-A | 50 | 6,000–12,000 | 7.5–8.5 | 20 | 12 | 0.1 | No | ST |
| VINNAPAS® SAF 72 | S-A | 50 | 1,500–3,500 | 7.5–8.3 | 23 | 23 | 0.1 | No | ST |
| VINNAPAS® SAF 608 | S-A | 50 | 700–3,000 | 7.0–8.0 | 0 | 0 | 0.1 | Yes | ST |
| PRIMIS® SAF 9000 | S-A | 42 | 50–500 | 6.5–7.5 | 21 | 13 | <0.1 | Yes ⁶ | ST |
| PRIMIS® AF 1000 | A | 42 | 110–40 | 8.0–9.0 | 20 | 9 | <0.1 | No | ST |
| PRIMIS® KT 3000 | N/A | 17 | 50–110 | 11.0–13.0 | N/A | N/A | N/A | Yes ⁶ | N/A |

¹ These figures are only intended as a guide and are not part of supply specifications.

² VAc = vinyl acetate

A = acrylate

E = ethylene

S = styrene

VC = vinyl chloride

VE = VERSA® vinyl ester

³ Residue after drying

⁴ PVOH = polyvinyl alcohol

CD = cellulose derivative

ST = surfactant

⁵ Approximately

⁶ Depends on main binder

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THE PERFECT FIT – RECOMMENDATION BY APPLICATION

| Grade | Product Recommendation | | | | | | | | | |
|--------------------|------------------------|-------------|--------------|------------------------------|-----------------------------|-----------------|-----------------|-------------------------------------|-----------------|--------------------------------|
| | Interior Paints | | | | | Exterior Paints | | | | |
| | Flat Paints | Silk Paints | Gloss Paints | Plasters and Textured Paints | Pastel or Deep Color Paints | Masonry Paints | Textured Paints | Elasto-meric/ Crack-Bridging Paints | Silicate Paints | Silicone Resin Emulsion Paints |
| VINNAPAS® 530 ND | | | | | | | | | | |
| VINNAPAS® 550 ED | | | | | | | | | | |
| VINNAPAS® EF 3777 | ● | ● | | ● | ● | | | | | |
| VINNAPAS® EP 16 | | | | | | | | ○ | | |
| VINNAPAS® EP 64 | | | | | | | | | | |
| VINNAPAS® EP 523 | | | | | | ○ | ○ | | | ● |
| VINNAPAS® EP 3360 | ● | ○ | | ● | ● | | | | | |
| VINNAPAS® EP 3455 | ● | ○ | | ● | ● | | | | | |
| VINNAPAS® EP 3560 | ● | ○ | | ● | ● | ○ | ○ | | | ● |
| VINNAPAS® EZ 3011 | ○ | ● | | ○ | ● | | | | | |
| VINNAPAS® EZ 3067 | | | | | | | | | | |
| VINNAPAS® EAF 380 | ○ | ● | ● | ● | ● | ○ | ○ | | | |
| VINNAPAS® EAF 730 | | | | | | ● | ● | | | |
| VINNAPAS® CEZ 3031 | ● | ○ | | ● | ● | ● | ● | ● | ● | ● |
| VINNAPAS® EZ 3019 | ○ | | | ● | ● | ● | ● | ○ | ● | ● |
| VINNAPAS® EZ 3112 | | | | | | | | | | |
| VINNAPAS® 825 ED | | | | | | | | | | |
| VINNAPAS® 822 HD | | | | | | | | | | |
| VINNAPAS® CEF 52 | | | | | | ● | ● | | | ● |
| VINNAPAS® 202 HD | | | | | | | | | | |
| VINNAPAS® 224 HD | | | | | | | | | | |
| VINNAPAS® 240 HD | | | | | | | | | | |
| VINNAPAS® SAF 34 | ○ | ○ | ○ | ○ | ○ | ● | ● | | ○ | ● |
| VINNAPAS® SAF 72 | ○ | ○ | ○ | ○ | ○ | ● | ● | | ○ | ● |
| VINNAPAS® SAF 608 | ○ | | | | | ○ | ○ | ○ | ○ | ○ |
| PRIMIS® SAF 9000 | ○ | ● | ● | | ● | ● | ● | | | |
| PRIMIS® AF 1000 | | | | | | ● | ● | | | ● |
| PRIMIS® KT 3000 | | | | | | ● | ● | | | |

● Highly recommended ○ Recommended

| Pastel or Deep Color Paints | Specialty, Intumescent, Fire-Resistant Paints | | | | | | Construction Applications | | |
|-----------------------------|---|-----------------------|----------------------|-----------------------|-------------|-----------------|---------------------------------------|---------------------------------------|---------|
| | Intumescent Paints | Fire-Resistant Paints | Oil-Resistant Paints | Substrate Preparation | Roof Paints | Joint Compounds | Renders, Plasters, Top Coat for ETICS | Adhesive Mortar & Base Coat for ETICS | Primers |
| | | | | | | | | | ○ |
| | | | | | | | | | ○ |
| ● | | | ● | | | | | | |
| ● | | | | | | ● | | | |
| | | | | | | | ● | | |
| ● | | | | | | | ○ | ○ | ● |
| | ● | | | | | | | | |
| ● | | | | | | | | | |
| ● | | ● | | ○ | ○ | | ● | ● | |
| ● | | | | | | | ● | ● | |
| | ● | | | | | | | | ○ |
| | | | | | | | ● | ● | |
| ● | | ● | | ○ | | | ● | ● | |
| | | | | | | | ● | ● | |
| ● | | | | ○ | ● | | | ○ | ● |
| ● | | | | ○ | ● | | | | |
| ● | | | | ● | ○ | | | | |
| ● | | | | | | | ● | | |
| ● | | | | | | | ● | | |
| ● | | | | | | | ● | | |

Fire-Resistant Paints

| Grade | Product Benefit | Performance Attributes | | |
|--------------------|---|------------------------|----------------|-------------|
| | | Flame Retardancy | Hydrophobicity | Flexibility |
| VINNAPAS® CEF 52 | Excellent inherent fire-resistant properties. | ● | ● | ○ |
| VINNAPAS® CEZ 3031 | General-purpose binder with good fire-resistant properties. | ● | ○ | ● |

Intumescent Coatings

| Grade | Product Benefit | Performance Attributes | | | | |
|-------------------|---|------------------------|---------------------------|--|---------------------------|-------------------------------------|
| | | Foam Development | Foam Stability/ Integrity | Paint Storage Stability under Demanding Conditions | Broad Formulation Ability | Dry Film Thickness (DFT) Efficiency |
| VINNAPAS® EZ 3067 | Standard binder for high-performance intumescent coatings. | ○ | ● | ○ | ○ | ○ |
| VINNAPAS® EZ 3112 | Premium binder that combines maximum performance with an extremely broad range of applications. | ● | ● | ● | ● | ● |

Roof Paints

| Grade | Product Benefit | Performance Attributes | | | |
|------------------|---|------------------------|------------------|------------|---------------------|
| | | Flexibility | Water Resistance | Durability | UV Light Resistance |
| VINNAPAS® SAF 34 | Binder for durable, water-resistant roof coatings. | ● | ● | ● | ● |
| VINNAPAS® SAF 72 | Plasticizer-free binder for durable, water-resistant roof coatings. | ● | ● | ● | ● |

Interior Paints

| Grade | Product Benefit | Performance Attributes | | | |
|--------------------|--|------------------------|-------------------|------------------|------------------------------------|
| | | Scrub Resistance | Gloss Development | Block Resistance | Compatibility with Tinting Systems |
| VINNAPAS® EP 3560 | High-end, state-of-the-art interior binder with optimized emissions profile. | ● | | | ● |
| VINNAPAS® EP 3455 | Current standard binder for environmentally friendly high-PVC paints. | ● | | | ● |
| VINNAPAS® EP 3360 | Excellent scrub resistance and high solids content, supports modern manufacturing processes. | ● | | | ● |
| VINNAPAS® EF 3777 | Low blocking in silk paints. | ● | ○ | ● | ● |
| VINNAPAS® EZ 3011 | Very-low-odor binder that offers a good price/performance ratio. | ○ | ○ | ● | ● |
| VINNAPAS® CEZ 3031 | Broad formulation ability up to high pH values. | ○ | | | ● |
| VINNAPAS® EZ 3019 | Broad formulation ability up to high pH values, increased hydrophobicity. | ○ | | | ● |
| VINNAPAS® EAF 380 | Excellent gloss, low blocking and compatible with effect additives. | ○ | ● | ● | ● |
| PRIMIS® SAF 9000 | High-performance additive used as a co-binder to increase stain resistance and easy-to-clean properties of interior paints. Compatible with a broad range of main binders. | N/A | N/A | N/A | N/A |

● Excellent ○ Good

Exterior Paints

| Grade | Product Benefit | Performance Attributes | | | | | | |
|--------------------|---|----------------------------|----------------------------------|-------------|-----------------|---------------------|------------------|------------|
| | | Resistance to Dirt Pick-Up | Hydrophobicity/ Water Resistance | Flexibility | Color Stability | Alkaline Resistance | Flame Resistance | Durability |
| PRIMIS® AF 1000 | State-of-the-art exterior binder with very low dirt pick-up and very high color stability. | ● | ● | ● | ● | ● | ○ | ● |
| VINNAPAS® EAF 730 | Advanced binder for exterior paints and plasters with high color stability offering exceptional performance. | ● | ● | ● | ● | ● | | ● |
| VINNAPAS® EZ 3019 | Broad formulation ability up to high pH values and suitable for environmentally friendly paints. | ○ | ○ | ● | ● | ● | | ● |
| VINNAPAS® CEZ 3031 | Broad utility binder with excellent color stability. | ○ | ○ | ● | ● | ● | ● | ● |
| VINNAPAS® CEF 52 | Binder for state-of-the-art formulations. | ● | ● | ● | ○ | ● | ● | ● |
| VINNAPAS® SAF 34 | Breathable in combination with SILRES® for silicone resin emulsion paints. | ● | ● | ○ | ● | ● | | ● |
| VINNAPAS® SAF 72 | Low-odor and breathable in combination with SILRES® for silicone resin emulsion paints. | ● | ● | ○ | ● | ● | | ● |
| VINNAPAS® EP 3560 | Entry-level exterior binder with improved efflorescence resistance. | ○ | ○ | ○ | ● | ○ | ○ | ○ |
| VINNAPAS® EP 523 | Entry-level exterior binder with very good color stability. | ○ | ○ | ○ | ● | ○ | ○ | ○ |
| PRIMIS® SAF 9000 | High-performance additive used as a co-binder to reduce snail trails and leeching of water-soluble additives in general. Compatible with a broad range of main binders. | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| PRIMIS® KT 3000 | High-performance additive used to significantly improve early rain resistance in colder climates. Enables final product to be used at temperatures below 6 °C. Compatible with a broad range of main binders. | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Joint Compounds

| Grade | Product Benefit | Performance Attributes | | | | |
|-----------------|---------------------------------------|------------------------|-------------|--|---------------------------|----------|
| | | Flexibility | Workability | Compatibility with Final Paint Systems | Broad Formulation Ability | Adhesion |
| VINNAPAS® EP 64 | High suitability for joint compounds. | ● | ● | ● | ● | ● |

● Excellent ○ Good

Renders, Plasters, Top Coat for ETICS

| Grade | Product Benefit | Performance Attributes | | | | | |
|--------------------|---|-------------------------------|------------------------|------------------------|----------------------------|-----------------|------------|
| | | Synthetic Resin-Bound Renders | Silicone-Bound Renders | Silicate-Bound Renders | Resistance to Dirt Pick-Up | Color Stability | Durability |
| VINNAPAS® EAF 730 | Advanced binder for exterior paints and plasters with high color stability offering exceptional performance. | ● | ● | ● | ● | ● | ● |
| VINNAPAS® EP 3560 | High versatility and good color stability. | ○ | ○ | | ○ | ● | ● |
| VINNAPAS® EP 523 | A product with a high cohesive force and versatility. | ○ | ○ | | ○ | ● | ● |
| VINNAPAS® CEZ 3031 | Fire-resistant all-rounder with special rheological qualities. | ● | ● | ● | ○ | ● | ○ |
| VINNAPAS® 822 HD | Excellent hydrophobic product with very low flammability. | ● | ● | | ● | ○ | ● |
| VINNAPAS® EZ 3019 | Hydrophobic all-rounder with good color stability. | ● | ● | | ○ | ● | ● |
| VINNAPAS® 202 HD | Ammonia-free product. | ● | ● | | ● | ● | ● |
| VINNAPAS® 224 HD | Proven benchmark for a wide range of applications. | ● | ● | | ● | ● | ● |
| PRIMIS® AF 1000 | Exterior binder with low dirt pick-up and high color stability. | ● | ● | | ● | ● | ● |
| PRIMIS® SAF 9000 | High-performance additive used as a co-binder to reduce snail trails and leeching of water-soluble additives in general. Compatible with a broad range of main binders. | N/A | N/A | N/A | N/A | N/A | N/A |
| PRIMIS® KT 3000 | High-performance additive used to significantly improve early rain resistance in colder climates. Enables final product to be used at temperatures below 6 °C. Compatible with a broad range of main binders. | N/A | N/A | N/A | N/A | N/A | N/A |

Adhesive Mortar and Base Coat for ETICS

| Grade | Product Benefit | Performance Attributes | | | |
|--------------------|--|------------------------|-------------|----------------|---------------------------|
| | | Flame Resistance | Flexibility | Hydrophobicity | Compatibility with Cement |
| VINNAPAS® EAF 730 | Advanced binder offering exceptional performance in multiple applications. | ○ | ● | ● | ● |
| VINNAPAS® 822 HD | Excellent hydrophobic product with high versatility. | ● | ● | ● | ● |
| VINNAPAS® EZ 3019 | Hydrophobic binder with special rheological properties. | ○ | ● | ○ | ● |
| VINNAPAS® CEZ 3031 | A proven all-rounder with special rheological qualities. | ● | ● | | ● |
| VINNAPAS® 240 HD | High-performance product with excellent flexibility. | | ● | ● | |
| VINNAPAS® 202 HD | Hydrophobic product with high adhesive/cohesive strength. | | ○ | ● | |
| VINNAPAS® 224 HD | Product for ready-to-use tile adhesives and embedding mortars. | | ○ | ● | |

● Excellent ○ Good

Oil-Resistant Paints

| Grade | Product Benefit | Performance Attributes | | |
|-----------------|-----------------------------------|------------------------|-------------|-------------|
| | | Barrier Efficiency | Flexibility | Ease of Use |
| VINNAPAS® EP 16 | Excellent oil-barrier properties. | ● | ● | ● |

Substrate Preparation

| Grade | Product Benefit | Performance Attributes | | | | |
|-------------------|--|------------------------|---------------------------------|-------------|------------------|--|
| | | Penetration | Adhesion to Critical Substrates | Flexibility | Water Resistance | Compatibility with Final Paint Systems |
| VINNAPAS® SAF 608 | Binder for surface preparation with excellent penetration and consolidation power. | ● | ● | ● | ● | ● |

Primers

| Grade | Product Benefit | Performance Attributes | | | | |
|------------------|--|------------------------|-----------------------|---------------------------------|-------------|------------------|
| | | Penetration | Surface Consolidation | Adhesion on Critical Substrates | Flexibility | Water Resistance |
| PRIMIS® SAF 9000 | Ultra-high penetration primer. | ● | ● | ● | ○ | ● |
| VINNAPAS® 240 HD | High-performance, extremely versatile primer. | ● | ● | ● | ● | ● |
| VINNAPAS® 202 HD | Low-VOC primer that provides maximum freedom in the choice of coalescing agents. | ○ | ● | ● | ○ | ● |
| VINNAPAS® 224 HD | Proven benchmark for primers. | ○ | ● | ● | ○ | ● |
| VINNAPAS® 825 ED | Performance primer with improved cohesion strength. | ○ | ● | ○ | ○ | ○ |
| VINNAPAS® 530 ND | General primer with good adhesion properties. | ○ | ○ | ○ | ○ | ○ |
| VINNAPAS® 550 ED | Low-viscosity general-purpose primer. | | ○ | ● | ● | ○ |

● Excellent ○ Good

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