

# VINNAPAS® EF575 – VAE BINDER WITH OPTIMAL COST PERFORMANCE RATIO FOR CONSTRUCTION ADHESIVES

VINNAPAS® EF575 is a versatile vinyl acetate-ethylene (VAE) binder used for construction adhesives that provides great flexibility in performance while offering a sustainable, economic solution.

### Low Environmental Impact

VINNAPAS® EF575 is manufactured without the addition of any APEO containing surfactants, defoamers, or formaldehyde/formaldehyde donors. It also has a total free residual vinyl acetate monomer content of <1,000 ppm.

### Strong Bond to a Variety of Substrates

VINNAPAS® EF575 provides great formulating flexibility as a binder used in construction adhesives. It demonstrates excellent adhesion to materials such as fiber reinforced plastic (FRP) and poly(vinyl chloride) (PVC) and also yields strong penetration into porous surfaces. VINNAPAS® EF575 can be formulated with various pigments, fillers, and thickeners to pass ASTM C557.



Measuring wood to wood shear strength.

### Properties of VINNAPAS® EF575

|                              |              |
|------------------------------|--------------|
| Solids [wt%]                 | 54.0–56.0    |
| Viscosity [mPa.s]            | 200–850      |
| pH                           | 4.0–5.0      |
| Density [g/cm <sup>3</sup> ] | Approx. 1.07 |
| Particle size [μ]            | Approx. 0.2  |
| T <sub>g</sub> [°C]          | Approx. 0    |

### Benefits of VINNAPAS® EF575 in Construction Adhesives

- Excellent adhesion to wood, FRP, PVC
- Can be formulated to pass ASTM C557
- Can be formulated with various pigments, fillers, and thickeners
- Compatible with other binder chemistries
- Does not contain any sources of formaldehyde or formaldehyde donors
- Manufactured without the use of alkylphenol ethoxylate components

### VINNAPAS® EF575 Construction Formula Performance Acc. to ASTM C557

| Test                       | Requirement                             | Result                                      |
|----------------------------|---|---|
| Tensile strength, 24 hours | 15 psi                                  | 28 psi                                      |
| Tensile strength, 14 days  | 25 psi                                  | 29 psi                                      |
| Shear strength, 24 hours   | 10 psi                                  | 97 psi*                                     |
| Shear strength, 14 days    | 40 psi                                  | 76 psi*                                     |
| Accelerated aging          | No cracking or flaking                  | No cracking or flaking                      |
| Freeze-thaw stability      | 3 cycles, no change in workability      | No change in workability                    |
|                            | 24 hours shear strength: 10 psi         | 100 psi*                                    |
| Static shear load          | No bond line movement (38 °C and 22 °C) | No bond line movement at either temperature |

\* Samples resulted in complete substrate failure.

## VINNAPAS® EF575 – General Purpose Construction Formula FLI-119

| Material          | Pounds         | Gallons       | Weight [%]   | Supplier     |
|-------------------|----------------|---------------|--------------|--------------|
| VINNAPAS® EF575   | 322.90         | 36.28         | 25           | WACKER       |
| Igepal® CA-897    | 12.92          | 1.55          | 1            | Rhodia       |
| Tamol™ 851        | 12.92          | 1.55          | 1            | Dow Chemical |
| Ethylene Glycol   | 12.92          | 1.39          | 1            |              |
| Foamaster® MO NXZ | 2.58           | 0.36          | 0.2          | BASF         |
| Drikalite®        | 684.55         | 30.29         | 53           | Imerys       |
| Natrosol™ 250HHR  | 16.79          | 1.45          | 1.3          | Ashland      |
| Water             | 226.03         | 27.13         | 17.5         |              |
|                   | <b>1295.77</b> | <b>100.00</b> | <b>100.0</b> |              |

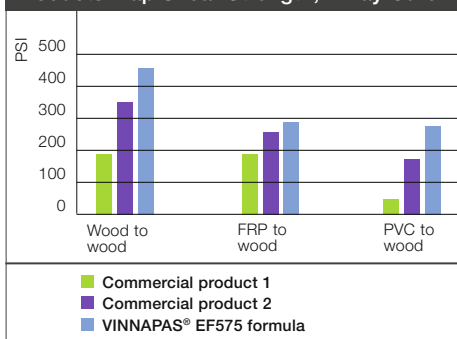
### Physical Properties

|                         |         |
|-------------------------|---------|
| Density [lbs./gal.]     | 13.0    |
| % solids, by weight     | 69.3    |
| % solids, by volume     | 52.4    |
| VOC [g/l]               | 19      |
| Pigment to binder ratio | 3.9     |
| Viscosity [mPa.s]       | 290,000 |
| pH                      | 7.6     |
| PVC                     | 58.0    |

### Formulation Stability

|                                |          |
|--------------------------------|----------|
| 4 week 50 °C viscosity [mPa.s] | 320,000  |
| Freeze-thaw stability          | 5 cycles |

### VINNAPAS® EF575 Formula vs. Commercial Products: Lap Shear Strength, 7 Day Cure



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For technical, quality, or product safety questions, please contact:

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