

PRIMIS® AF 1000

The Ultimate Exterior Binder for Best-in-Class Dirt Pick-Up Resistance and Color Stability

PRIMIS® AF 1000 is WACKER's flagship binder for the production of exterior architectural paints that offer superior performance. Containing an inorganic core in an aqueous polymer dispersion based on acrylic monomers, it confers very low dirt pick-up and high color stability that will protect a facade's good looks for years.

Properties of PRIMIS® AF 1000

Solids [wt%]	42 ± 1
Tg [°C]	20
MFFT [°C]	9
Viscosity [cPs]	110 ± 40
pH	8-9

Recommended Applications for PRIMIS® AF 1000

Exterior

Masonry paints	●●
Textured paints	●●
Elastomeric/crack-bridging paints	●
Pastel or deep-color paints	●●
Silicone resin emulsion paints	●●
Plasters	●●

●● Excellent ● Good

PRIMIS® AF 1000 Takes Acrylics One Step Further

The inorganic and organic ingredients combine to yield a unique set of properties. The former contribute high color stability, low dirt pick-up, fire retardancy and mechanical stability, while the latter confer adhesion, cohesion and flexibility. It is the homogeneous combination of these two ingredients which makes PRIMIS® AF 1000 a superior product.

PRIMIS® AF 1000 – For Cleaner Facades

Dirt pick-up poses an ongoing major challenge for exterior coatings, and exerts a great influence over whether or not we like the look of a building. Facades that continue to look new will remain attractive to us for much longer. PRIMIS® AF 1000 is designed to significantly reduce dirt pick-up compared to other binders.

PRIMIS® AF 1000 – For Brighter Colors

Color fading is another challenge that confronts exterior paints. More sensitive organic pigments, like special reds and blues, may tend to lose their original color very quickly. Although inorganic pigments could be used and would be more stable, they do not offer the same breadth of colors as organic pigments. Paints formulated with PRIMIS® AF 1000 outperform commonly used styrene and pure acrylics – tests have shown that colors stay brighter for longer on exposure to UV light.

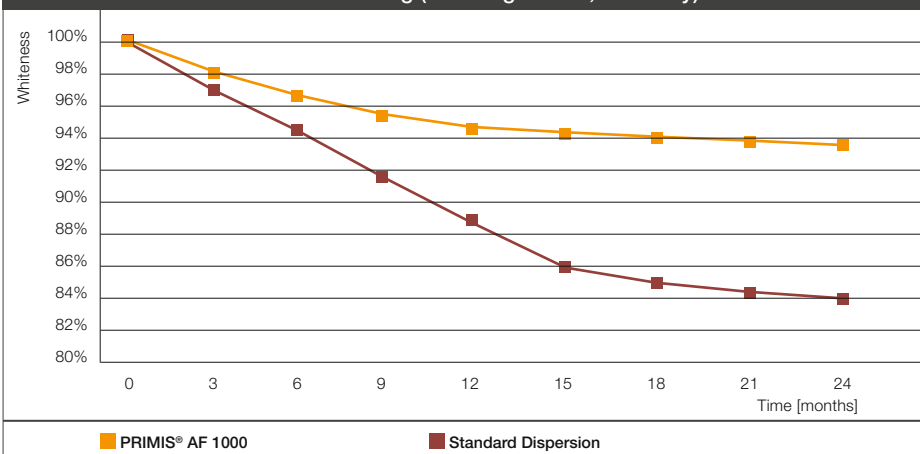
PRIMIS® AF 1000 – For Greater Protection

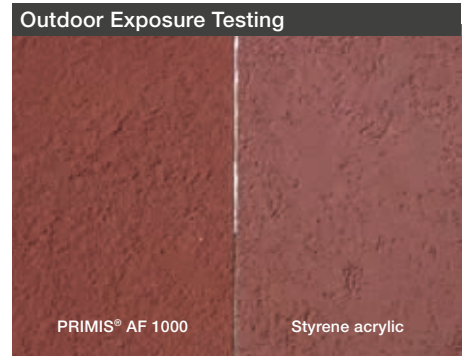
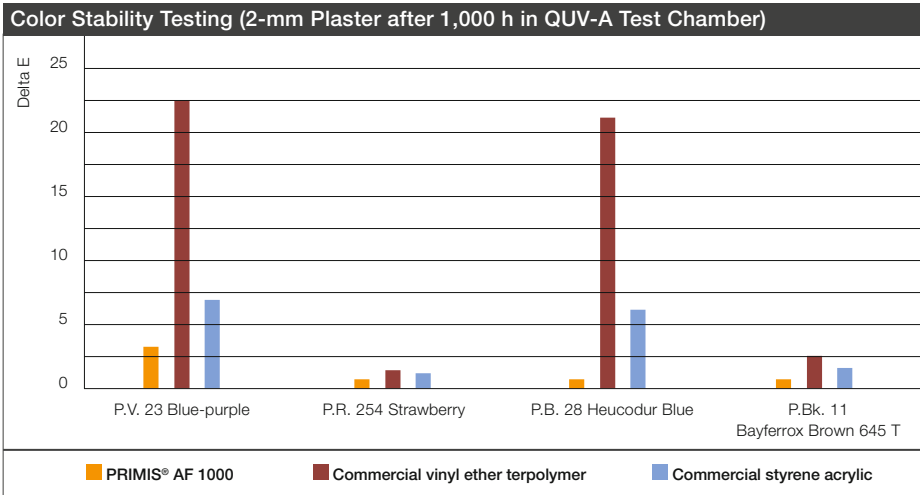
PRIMIS® AF 1000 is also the answer whenever greater protection against water is needed. Its organic ingredients provide very good hydrophobicity that limits water uptake. For even greater performance and protection, PRIMIS® AF 1000 can be combined with SILRES® technology, which represents the ultimate in protection against water: it simultaneously reduces capillary water uptake on the one hand, while boosting water-vapor permeability on the other.

PRIMIS® AF 1000 – For Fewer Snail Trails

Emulsifier leaching, also known as snail trails, poses a common challenge for exterior paints, as it gives the facade a negative appearance. PRIMIS® AF 1000 lessens this impact by reducing the leaching effect. Consequently, smaller trail widths and a better appearance can be achieved.

Significant Improvement in Dirt Pick-Up Resistance by an ETICS Top Coat Based on PRIMIS® AF 1000 – Outdoor Weathering (60°/Burghausen, Germany)





Outdoor weathering test at Burghausen (Germany): 60° SW direction with 1.5 – 2.0 mm dispersion plaster for 120 weeks (pigment: Bayferrox Brown 645 T). The PRIMIS® AF 1000 based product (left) shows significantly better color acceptance and color stability than the styrene acrylic (right).

PRIMIS® AF 1000 Offers the Ideal Combination of Different Material Properties

Inorganic polymer (silica)

Inorganic polymer

- Hard and brittle
- Thermostable
- Durable
- Hydrophilic

Organic polymer and silane chemistry

Organic polymer

- Flexible
- Functional
- Thermoplastic
- Good adhesion

Silane chemistry

$$R - (CH_2)_n - Si \begin{matrix} \diagup OR \\ \diagdown OR \\ \diagdown OR \end{matrix}$$

PRIMIS® AF 1000 binder

Inorganic core: silica particle
Organic shell: acrylic copolymers

Properties

- Homogeneous and stable
- Flexible and thermostable
- Transparent

- ### At a Glance: Properties of PRIMIS® AF 1000
- Superior performance binder for exterior coatings, suitable for paints and plasters
 - Broad range of PVCs possible (mid-30s to mid-60s)
 - Very low dirt pick-up
 - Excellent color stability and compatibility, even with sensitive organic pigments
 - Reduction of snail trails in terms of trail width and appearance
 - Very good compatibility with silicone resin emulsion paints
 - Higher inherent flame retardancy than standard acrylic systems
 - Very good flexibility and adhesion
 - Very good film-forming properties
 - Produced without the use of APEOs
 - Low blocking behavior
 - Very good scrub resistance