



ACRYLIC HYBRIDS FROM DOW COATING MATERIALS

HYDROTECH™

Primal™ HG-1000

EXTERIOR DURABILITY PERFORMANCE IN TRIM PAINTS



Primal™ HG-1000 containing the new **Hydrotech™** technology represents a breakthrough in low VOC decorative coatings with an outstanding improvement in open-time performance.

This new hybrid water-borne acrylic polymer dispersion is optimally designed for both interior and exterior applications, with superior yellowing resistance, as revealed by our exposure data.

Dow Advanced Materials' outdoor Exposure Station in the foothills of the Southern Alps presents a rigorous environment for testing the outdoor durability of paints as it combines high UV exposure with severe thermal cycles.



Gloss paints based on **Primal™ HG-1000** were applied on un-primed yellow pine boards and exposed South at 45° angle.

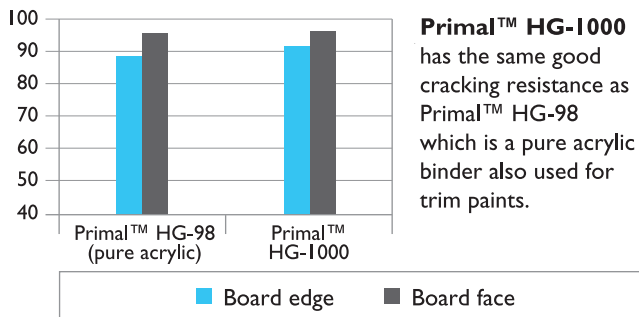
Key durability characteristics

- Low yellowing characteristics
- Good cracking resistance similar to pure acrylics
- Good color retention:
 - minimal chalking
 - remains whiter than alkyds
- Good mildew resistance similar to acrylics, significantly better than alkyds
- Gloss retention similar to most alkyd

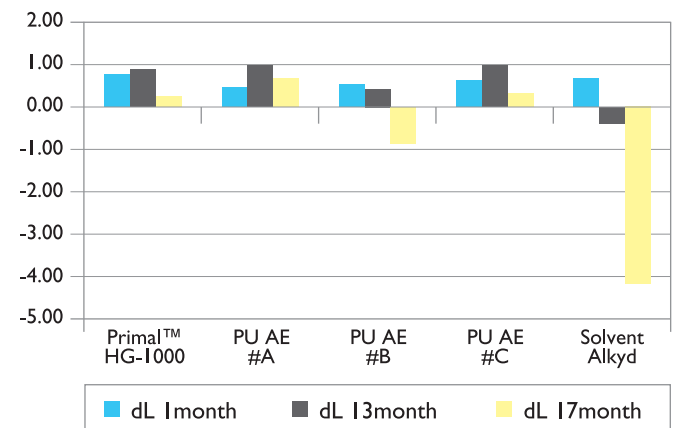
The **Primal™ HG-1000** based gloss paint evaluated below contains 19% PVC of titanium dioxide, is coalesced with Texanol and is 38% volume solids.

Cracking Resistance

Rating of 100: no cracking at all



Color Retention

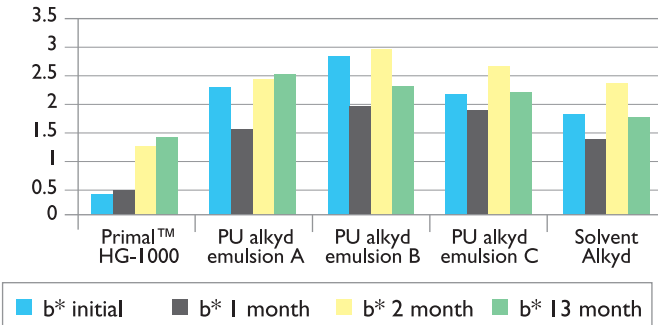


Delta L was measured for paints tinted in blue. Data show that the paint based on PU alkyd emulsion #B and the solvent alkyd paint have negative Delta L after 17 month exposure South 45°. A negative Delta L means that those paints are getting lighter due to chalking. **Primal™ HG-1000** based paint on the contrary has minimum chalking.

Yellowing Resistance

b* values

13 month Yellowing Resistance (b* value)
1 coat of white paint on alodine panel, south 45°

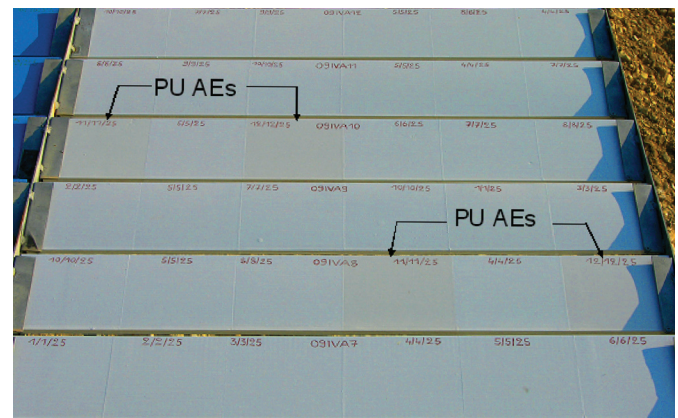


The paint based on **Primal™ HG-1000** is whiter than the ones based on alkyds after 13 month exposure South 45° (the lower the b* value, the less yellow).

PU alkyd emulsion painted panels are indicated with arrows. All other panels are painted with **Primal™ HG-1000** formulation variants. The **Primal™ HG-1000** panels are whiter than the PU alkyd emulsion panels.

Visual Yellowing

4 month exposure, primed spruce, South 45°



Make sure that Primal™ HG-1000 with new Hydrotech™ technology is in your formulations.

For more information on how Primal™ HG-1000 can help you, contact your local Dow representative.

SAFE HANDLING INFORMATION

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Coating Materials