



January 18, 2010

Mr. Mike O'Reardon, P.E.
ICC-ES
900 Montclair Road, Suite A
Birmingham, AL 35213

Re: Acceptance Criteria for Wood-based Exterior Composite Trim Treated with Zinc Borate (ZB) Preservative by a Non-pressure Process; Subject AC424-0210-R1

Dear Mike:

I have some concerns on the proposed acceptance criteria.

- a) Section 1.4.1: The definition of "wood-based exterior composite trim" appears to overlap with products covered under AC321. I don't believe this is the intent of this proposed AC. Therefore, I suggest it be clarified by declaring those products covered under AC321 are outside the scope of this AC.
- b) Section 3.3.4: The minimum zinc-borate retention is specified at 0.75% for the exterior trims. Are there any studies to show that this retention level is adequate to protect the exterior trims from decay and termites? Both the AWP A T1 standard and AC321 specify a minimum retention of 1.46% for composite wood siding. Even the oriented strand board (OSB) that is strictly limited to dry service conditions (not exterior use) is required a minimum of 0.88% for protection against decay and termites, let alone the exterior trims. It is highly questionable why the 0.75% is chosen for this AC.
- c) Section 4.0: Throughout this section, the required number of samples is usually 3, which is too small to provide any confidence on the mean test results. For example, 3 trims are required to be sampled and tested for lateral nail of 3/4-inch and 1-inch trim each. Three specimens will be cut from each trim sample. This number of specimens ($3 \times 3 = 9$) can provide a 75% confidence on the mean at a 5% accuracy only if the coefficient of variation of the test results is 12% or less, which seems unlikely. As a comparison, the fastener tests for wood structural panels are required to be 40 tests minimum per thickness.

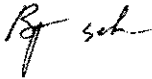
For the modulus of rupture (MOR) tests, the number of specimens is 3×2 or 6, which can provide a 75% confidence on the mean at a 5% accuracy only if the coefficient of variation of the test results is 9% or less, which is highly unlikely again.

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These are all small specimens and easy tests to conduct. I would strongly suggest that the number of trim samples be increased to at least 10 samples per thickness (e.g., $10 \times 3 = 30$ specimens for lateral nail tests and $10 \times 2 = 20$ for MOR) for all test types required in this AC (i.e., not limited to lateral nail and MOR) to avoid the false sense of security on the estimate of the test mean.

If there are any questions on my comments, please feel free to contact me. Thanks for your consideration.

Sincerely,



Borjen ("B.J.") Yeh, Ph.D., P.E.
Director
Technical Services Division
E-mail: borjen.yeh@apawood.org

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January 17, 2010

Mr. Mike Rhodebeck
900 Montclair Rd, Suite A
Birmingham, AL 35213

RE: Proposed Acceptance Criteria for Wood-based Exterior Composite Trim
Treated with Zinc Borate (ZB) Preservative by a Non-pressure Process,
Subject AC424-0210-R1 (MO/MR)

Dear Mr. Rhodebeck:

The Composite Panel Association (CPA), founded in 1960, represents the North American wood-based composite panel and decorative surfacing industries on technical, regulatory, quality assurance and product acceptance issues. CPA General Members include the leading manufacturers of particleboard, medium density fiberboard (MDF) and hardboard, representing about 95% of North American manufacturing capacity. As a highly-regarded and accredited standards developer, CPA writes, publishes, and maintains industry product standards, participates in the standards development work of ANSI, ASTM and others, sponsors product acceptance activities, and works closely with governmental agencies and model building code bodies. CPA currently sponsored three ANSI hardboard product standards.

Working closely with North American hardboard manufacturers, CPA has drafted a new, first of its kind, "product" standard for hardboard trim. This standard is over 90% complete. While this draft standard has a few similar performance requirements as ANSI A135.6 Hardboard Siding, it will specifically address wood-based trim products. Last October, the CPA Board of Directors requested that the draft trim standard be finalized and authorized CPA to initiate the process of having the new trim standard recognized as an American National Standard Institute product standard that is acceptable for building code recognition. At this time we anticipate finalizing the draft standard by mid year and then immediately initiating the ANSI consensus approval process that hopefully will take less than one year.

CPA requests that the ICC-ES Evaluation Committee slow down its development of the *Proposed Acceptance Criteria for Wood-based Exterior Composite Trim Treated with Zinc Borate (ZB) Preservative by a Non-pressure Process, Subject AC424-0210-R1 (MO/MR)* until the new trim

CANADA

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standard receives ANSI approval since it would be the most appropriate standard to build AC424 upon. It is my observation that the Evaluation Committee's document more closely resembles a product standard rather than an acceptance criteria document.

CPA welcomes ICC-ES Evaluation Committee participation in the ANSI consensus process. Please forward names of individuals and organizations that you believe will strengthen the ANSI balloting process and CPA will add them to the invitation list.

We look forward to working closely with your group over the coming months to achieve a technically sound AC424 that serves the best interest of all stakeholders.

CPA plans to keep your committee updated on our progress to finalize its new trim standard. Please contact me with any questions.

Sincerely,



Gary L. Heroux
Vice President, Product Acceptance
gheroux@cpamail.org



January 14, 2010

Mr. Mike Rhodebeck
900 Montclair Rd, Suite A
Birmingham, AL 35213

Re: Proposed AC424 for Wood-based Exterior Composite Trim Treated with ZB Preservative by a Non-pressure Process

Dear Mr. Rhodebeck,

The intent of this letter is to provide recommendations to the above proposed Acceptance Criteria. We believe that our recommendations base the proposed AC on currently accepted standards that adequately set the minimum criteria for a durable exterior wood lignocellulosic fiber composite trim.

Within the proposed Acceptance Criteria, we propose several changes. First, the title of the proposed AC424 is too general. The scope of this proposed AC should be limited to wood lignocellulosic fiber composites using a wet or dry hardboard type process. Therefore the title of the AC should better define the category of trim. The words "Lignocellulosic Fiber" should be added so as to read "Wood Lignocellulosic Fiber Based Exterior Composite Trim Treated with ZB Preservative by a Non-pressure Process". The definition in section 1.4.1 should also reflect this. Please see the recommended definition in my last paragraph of this letter.

Exterior siding and trim experience by the very nature of building practices are exposed to very similar conditions. Aside from target thickness, wood lignocellulosic fiber based trim should be held to the same requirements as similar siding compositions. The 2009 IRC states that "Hardboard siding shall comply with CPA/ANSI A135.6." Given this precedent, it is a reasonable argument that AC424 should specify the same requirements that are spelled out in the consensus standard ANSI A135.6.

The American Wood Protection Association (AWPA) standard T1, section J includes a minimum ZB retention for engineered wood siding. Although the specific composition is different than the composition covered by this proposed AC, it is a

recognized standard for a non-pressure treated wood composite by a panel of wood preservation experts and based on years of exposure data studying the depletion rate of ZB. Therefore, the minimum retention specification in AC424 should reflect the minimum 1.0% by weight limit prescribed in AWWA T1, section J.

Exterior trim ranges widely in target thickness based on application and market requirements. Rather than limit the thickness as in the proposed AC, table one should be removed and the definition in section 1.4.1 should better define the trim as:

1.4.1 Wood Lignocellulosic Fiber Based Exterior Composite Trim Treated with Zinc Borate (ZB) Preservative by a Non-pressure Process: The wood lignocellulosic fiber based exterior composite trim treated with ZB preservative by a non-pressure process is a wet or dry process hardboard-type wood composite treated with zinc-borate in a non-pressure process. The trim is formed into boards with smooth or textured surfaces as a non-structural architectural accent on the exterior of a structure. The trim can be cut and machined with standard woodworking tools and attached to the structure with nails or screws.”

Thank you for your consideration.

Respectfully,

A handwritten signature in black ink, appearing to read "Lance Olson", written in a cursive style.

Lance Olson, LP SmartSide Siding
Field Technical Support Mgr.