



May 18, 2009

Brain Gerber, S.E.
ICC-ES
5360 Workman Mill Road
Whittier, CA 90601

Re: Acceptance Criteria for Structural Cementitious Floor and Roof Sheathing Panels;
Subject AC318-0609-R2

Dear Kurt:

Thanks for making the revisions to the draft AC based on my comments on AC318-0209-R1. I have a couple of comments for your consideration.

- a) Tables B1 and B2 – Since there are wet bending strength requirements in Table B1, it seems that wet EI requirements should be added to Table B2. This would not be adding extra burden to the manufacture since the wet EI can generally be obtained from the same bending tests as the wet bending strength.
- b) The QA values in Tables B1 and B2 may be applicable to a specific cementitious sheathing panel. How would the same provisions be applied to different cementitious sheathing panels? It would seem to be better to leave these tables out of this AC.

With regard to your question concerning the specified 300-lbf concentrated load distributed through a 2-1/2-ft by 2-1/2-ft area in the IBC, it seems obvious that the concentrated load of 400 lbf through a 3-inch-diameter disk at the most critical panel location, as required in ASTM E 661, would be much more conservative and meet the intent of the IBC requirement.

Thanks for your consideration.

Sincerely,

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

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

REPRESENTING THE ENGINEERED WOOD INDUSTRY



United States Gypsum Company

550 West Adams Street
Chicago, IL 60661-3676
312 436-4000
Fax: 312 672-4093

Founded in 1902

May 19, 2009

Brian Gerber, S.E.,
Yamil Moya, P.E.,
ICC Evaluation Service
5360 Workman Mill Road
Whittier, CA 90601

Subject: Proposed Revisions to the Acceptance Criteria for Structural Cementitious Floor and Roof Sheathing Panels, AC318-0609-R2 (BG/YM)

Dear Brian & Yamil,

This letter is in response to the proposed revisions to the subject criteria, and the staff letter dated April 30, 2009. Following the same order of revisions outlined in the staff letter of April 30, 2009, we have prepared our response. We offer no comment or additional revision for the items not listed in this letter.

4. Based on the standard referenced in Section 1.3.3, Section A5.3.3 will need to reference the correct sections within ASTM D 1037-99.

A5.3.3 Fastener Holding: Panels shall be tested for fastener lateral load, and withdrawal load, and pull-through load in accordance, respectively, with PS2-04, Section 7.4, ASTM D 1761, Section 10.2 ASTM D 1037, Sections 47-53, and ASTM D 1037, Sections 54-60. Panels shall comply with Table A3 of this criteria for the applicable panel thickness.

These changes should also be reflected on the title of Table A3.

TABLE A3—SCREW AND NAIL PERFORMANCE CRITERIA UNDER LATERAL, AND WITHDRAWAL LOADS, AND PULL-THROUGH LOADS FOR PANELS TESTED PER PS2-04, SECTION 7.4, ASTM D 1761, SECTION 10.2 ASTM D 1037 SECTIONS 47-53, AND ASTM D 1037, SECTIONS 54-60

FLOOR AND ROOF SHEATHING SCREWS OR NAILS

7. B2.6 – As proposed in our February 17 letter, wet conditioned samples shall be submerged in water for a specified period of time to enable comparative performance of multiple production runs. Revise the language to include the duration of water submersion.
 - b.** Wet: Completely submerge the specimens in water, maintained at a temperature of 70±5 °F (21±3°C). Remove the specimens from water after 48 +/- 2 hours.

Blot the specimens dry until no free moisture is visible on the surface.
Immediately commence with the test procedure.

In addition to the above, the April 30 letter seeks input on two other items, and we offer the following comments / clarifications:

1. The values that appear on Tables B1 & B2 were derived based on considerations on product thickness and references to PS2-04. Considering the AC 318 bending strength specification of the floor sheathing panel when manufactured at 3/4 inch thickness, one can design a roof sheathing panel at 5/8 inch thickness whose equivalent bending strength is 1007 lbs-in/ft. This value falls in the range of specified values shown in Table 7 of PS 2 – 04 for roof sheathing panels, and as such is a reasonable strength requirement for this application
The same logic is applied to the wet bending strength & dry bending stiffness values.
2. The values specified in the existing Tables A1 and A2 assure that the a concentrated live load of 300 pounds (distributed over an area of 2.5 feet x 2.5 feet) would be safely carried by the roof sheathing panel. As such, no additional revisions in Table A2 appear to be necessary.

In addition to the comments above, we noticed a typo on Table B2 for Roof Sheathing for spans of 24 inches on center for the long dimension; it should read 129,051 lbf-in³/ft width, instead of 120,051 lbf-in³/ft width.

We believe that these comments and clarifications given in this letter, along with the corresponding changes suggested by staff will allow for AC 318 to extend the scope of use for the products reviewed under such. Please contact us if you have any questions or require any further information.

Sincerely,



José Manuel Estrada
Architectural Systems & Code Affairs
United States Gypsum Company
312.436.4260 – Office
312.672.3877 – Fax
jmestrada@usg.com

cc: A. Dubey, C. Chan,
K. Natesaiyer, N. Sanchez.