To: ICC-ES Evaluation Committee  
From: Steven R. Thorsell  
Date: October 9, 2015  

MEMO

Two public comments were received regarding the subject criteria and are posted on our website. The comments consisted of the following:

Comments provided by Henri Fennell, CSI/CDT of H C Fennell Consulting, LLC, dated September 15, 2015, followed by ICC-ES staff responses:

1. Section 1.3: Comment related to the need for special inspection requirements applicable to the IRC.

   ICC-ES staff response: The comment requests that a reference to requirements for special inspection be included for the IRC. We believe that this comment is also related to Comment 5 and as is noted in that response, it is not the intent to require special inspection under the IBC and as such there would be no such requirement under the IRC.

2. Section 1.4.4: Comment related to the proposed definition of theoretical application rate or, conversely, requiring the criteria to specify the maximum coating thickness.

   ICC-ES staff response: The proposed revision to the definition of theoretical application rate would require the criteria to account for surface texture, overspray, and miscellaneous losses. Since this is not the intent of these requirements, we propose to keep the definition as originally proposed. With regard to the comment related to maximum coating thickness, AC456, if approved, would require evaluation reports to specify the coating thickness that was used during the room corner test. Based on our review of numerous room corner test reports, our understanding is that the application of coatings in a thickness significantly greater than the minimum thickness established by testing is not a concern. If, however, documentation exists establishing the concern raised about coatings not performing as intended when applied at greater thicknesses than those tested, we would appreciate having it presented for our review.

3. Section 3.4.2: Comment requesting that Method 2 (medallion/target method) be removed from the proposed criteria.

   ICC-ES staff response: Method 2, as proposed, is the same method used by AC377 for measuring the thickness of coatings applied over spray-applied foam plastics. The
AC456-1015-R2

medallion/target method has been used by laboratories since revisions to AC377 were approved in June of 2011. Therefore, it is our position that Method 2 needs to remain because if Method 2 is not included in AC456, it would potentially invalidate previously submitted test data for coated assemblies currently qualified under AC377 and the corresponding assemblies recognized in affected ICC-ES evaluation reports. For consideration during future revisions to AC377 and AC456, we welcome input from industry and the laboratories currently performing room corner testing regarding methods used to measure coating thicknesses.

4. **Section 3.5:** Comment related to theoretical application rates and the need for the criteria to address “adjusted” application rates.

**ICC-ES staff response:** See item 2 for the staff response regarding the comment for Section 1.4.4.

5. **Section 4.4 (proposed as new):** Comment related to the need for special inspection requirements applicable to the IRC.

**ICC-ES staff response:** The comment regarding the addition of requirements for special inspection of the coating application refers to the requirements of the Sections 1705.3 and 1705.6 of the IBC. We believe that the commenter's intent was actually to reference 2015 IBC Sections 1705.14 and 1705.14.6 (2012 IBC Sections 1705.13 and 1705.13.6) which are the sections that apply to sprayed fire-resistant materials (SFRM). However, it should be noted that these IBC requirements are for materials used to provide a designated hourly fire-resistance rating to building elements where such material is used as a means of complying with the applicable fire-resistance rating established in IBC Table 601. The use of SFRM as referenced in 2015 IBC Section 1705.14 is for situations where a building element to which a SFRM is applied must demonstrate the ability to resist fire for periods of 60, 120 or 180 minutes in either a restrained or unrestrained condition. In our opinion, the need for the special inspection required in the IBC for SFRM is not applicable to coatings that are used to provide foam plastic insulation with protection from ignition for a period of 15 minutes, as is required for thermal barriers.

6. **Section 5.2:** Comment related to the need for evaluation reports to specify whether the coating thickness of the recognized assembly is based on the theoretical or calculated coating thickness or on an adjusted application rate.

**ICC-ES staff response:** The thickness of the coating, for an assembly recognized in the evaluation report, will be based on the coating thickness determined for the tested assembly. The theoretical application rate required by Section 5.4 of AC456 is to be included in the coating manufacturer’s application instructions.

7. **Section 5.4:** Comment related to the comments in items 2 and 4 regarding Section 1.4.4.

**ICC-ES staff response:** See item 2 for the staff response regarding Section 1.4.4.
8. **Appendix A:** Comment related to comments in items 2, 4 and 7 regarding Section 1.4.4. 
   ICC-ES staff response: Please refer to that See item 2 for staff response regarding Section 1.4.4.

Comment from John Stahl of Preferred Solutions, Inc., dated September 15, 2015, regarding the terms related to application rates followed by ICC-ES staff response.

9. Please refer to the rebuttal letter provided by Roger Morrison, Deer Ridge Consulting, Inc., dated September 23, 2015. ICC-ES staff is in agreement with the rebuttal response from Mr. Morrison.

We would like to note that there we are proposing the following editorial revisions to AC456:

1. Section 1.4.3, line 45: Correct a typographical error. The wording ‘fir-protective’ should read ‘fire-protective’.

2. Section 2.1.2, line 63: Revise “…minimum DFT” to read “…minimum coating thickness as determined in accordance with Section 3.4-DFT”. The use of either WFT or DFT is consistent with the references to film thickness in Section 2.4, line 76, Section 3.2, lines 89 and 90, Section 3.3, line 99, Section 3.4, line 107, Section 3.5, line 158 and Section 5.2, line 180.

3. Section 2.1.2, line 63, item (6): Remove italicization from “application rate” because this term is not a defined term in Section1.4.

4. Section 3.2, lines 89 and 90: Revise to read “…minimum wet film thickness (WFT), or dry film thickness (DFT) and theoretical application rate…” because when the ASTM E84 or UL 723 testing is done, the specimen will be applied at either a wet film thickness or dry film thickness for which recognition is sought and not applied a theoretical application rate and so this reference isn’t applicable.

5. Section 3.3, lines 99, 100 and 101: Delete the second sentence entirely. The physical property tests in this section are not related to the thickness or application rate of the coating.

6. Section 3.3, line 102: Revise “…ASTM D1475 and-or ASTM D2196, respectively…” for clarity. ASTM D1475 is used to determine weight and ASTM D2196 is used to determine viscosity.

7. Section 3.4, line 106: Delete “…during…” for clarity.

8. Section 3.4.2, line 128: Revise Section number to read “3.4.1.1” to correct a numbering error.

9. Section 3.4.3, line 141: Revise Section number to read “3.4.2” to correct a numbering error.
10. Appendix A, line 192: Revise to read “The following are methods means that are to be used…” to match line 191.

11. Appendix A, lines 196 and 200: Revise to read “… is may be calculated…” to remove permissive language.

12. General editorial: Italicize throughout the criteria terms that are defined in Section 1.4.

The ICC-ES staff seeks further input from interested parties and the Evaluation Committee on the public comments.

Thank you for consideration of the above items.