As a follow up to the hearing on December 17, 2007, we offer the following comments on Joint Appendix JA7 – Installation Procedures for Medium-Density, Closed-Cell and Low Density, Open-Cell Spray Polyurethane Foam (SPF):

1. **JA7.2 Terminology:**
   
   A. The term “Vapor barrier” is not defined. We recommend removing its reference from JA7.
   
   B. Spray Polyurethane Foam (SPF): The word “isocyanurate” should be spelled “isocyanate.”

2. **JA7.3 General Requirements**

   A. Correct typo in bullet item that begins “Low-Density SPF insulation is open cell...”: The word “density” has a zero in it.

3. **JA7.9 R-Value and U-Value Specifications**

   A. “For Medium Density foam all the total R-value shall be calculated based on ... an R-value of 5.8 per inch.”

   The R-value of closed-cell spray polyurethane foams is highly dependent on the blowing agent gas contained within the foam cells. The blowing agent gas varies with the spray foam formulation. Therefore, the R-value of closed-cell spray foam will vary from manufacturer to manufacturer and from system formulation to system formulation.

   The R-value of 5.8 is not representative of closed-cell spray foams in general and does not allow for the differences between spray foams specifically.

   Classifying all closed-cell spray foams with an R-value of 5.8 unfairly and erroneously misrepresents the performance of the product in the field and unfairly and erroneously positions the spray polyurethane foam insulation industry at a competitive disadvantage.
In December 2007, NCFI submitted documentation to the California Bureau of Home Furnishings and Thermal Insulation. In that submittal, we provided aged R-values of various closed-cell, medium density spray polyurethane foams as indicated in the following table:

<table>
<thead>
<tr>
<th>SPF System Number</th>
<th>R-value per inch (°F•hr•ft²/Btu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-001</td>
<td>6.9</td>
</tr>
<tr>
<td>10-011</td>
<td>6.9</td>
</tr>
<tr>
<td>11-012</td>
<td>6.4</td>
</tr>
<tr>
<td>11-016</td>
<td>6.4</td>
</tr>
<tr>
<td>11-011</td>
<td>6.4</td>
</tr>
<tr>
<td>11-015</td>
<td>6.4</td>
</tr>
</tbody>
</table>

As there is variation in R-value between manufacturers and between systems, we recommend that the final R-value of the assembly be based on the manufacturer’s labeled R-value as required in Sections JA7.3 and JA7.10.

If you have any questions on the above, we will be glad to discuss them with you.

Regards,

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