

11 April 2016

RE: Proposal RB152-16 and brief new background information

Dear IRC-Building Code Committee member,

We are writing to share supplementary information relevant to proposal RB152-16 for the International Residential Code. Enclosed you will find:

- Information about an existing foam plastic insulation product that is widely used in Europe demonstrating that foam plastic insulation without flame retardants can have the physical properties suitable for use below-grade and below slabs-on-grade, and that such products are both safe and acceptable.
- Statements of support from dozens of architecture, engineering, and construction organizations and other experts and stakeholders.

We have also made this information available to the public on SaferInsulation.org, and handouts will be available in-person at the Committee Action Hearings.

We recognize and respect the importance of foam plastic insulation – the most common insulation material used in below-grade applications – in providing building energy savings. There is an increasing market demand for insulation and other construction materials that do not contain flame retardant chemicals. This proposal seeks to provide an option for designers, builders, and developers who want to utilize high-performance foam plastic insulation below grade without hazardous flame retardants where not needed for fire safety.

We have attached information on a European insulation product, Sundolitt XPS 300, to clearly establish that flame retardant-free foam plastic insulation suitable for the uses described in our proposal already exists and has been widely, successfully, and safely used for these and similar applications in Europe for many years. Similar products cannot currently be made available in the U.S. because of building code requirements for surface burning characteristics (IRC Section R316.3). The current code should be updated to allow for the safe use of such materials below-grade.

It is important to note that one of the applications referenced in our proposal, frost-protected shallow foundations (IRC Section R403.3), was developed in Europe and successfully used for fifty years before being accepted for use in the United States. Quoting from the foreword of HUD's 1994 *Design Guide for Frost-Protected Shallow Foundations*¹: "Although the technique is

¹ <https://www.huduser.gov/publications/pdf/fpsfguide.pdf>

new to United States builders and code officials, it has been used effectively in Scandinavia in more than one million homes." Similar to this example, we seek to enable use of a product for below-grade insulation applications that is already safely and widely used in Europe.

In response to requests from previous code committee members for fire test data based on standard test methods, we note that there are no fire test standards for the applications covered by this proposal. This is because there is no fire hazard for exterior below-grade insulation and insulation under concrete slabs-on-grade. Nonetheless, we have carried out comparative fire tests on the performance of insulation with and without flame retardants under concrete showing no significant difference in performance. Details of that testing can be found in the Fire Testing Whitepaper available at SaferInsulation.org.²

Finally, we have included statements of support for the proposal from the Architecture, Engineering, and Construction communities. More than 40 organizations have voiced their support to date and are interested in having the option to use insulation without hazardous flame retardants below grade.

Thank you for your consideration of the above information as you evaluate the proposal and prepare for the Committee Action Hearings later this month.

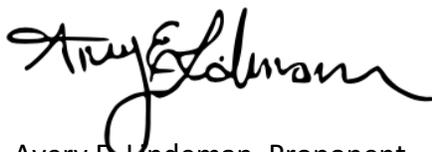
Sincerely,



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² http://saferinsulation.org/wp-content/uploads/2016/03/RB152-16_FireTest_Whitepaper_032116.pdf