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June 6, 2016

Donald S. Clark, Secretary  
Federal Trade Commission Constitution Center  
400 7<sup>th</sup> Street SW, 5<sup>th</sup> Floor  
Suite 5610 Annex B  
Washington, DC 20024

Re: 16 CFR part 460 – R-value Rule Review  
File No. R811001  
Labeling and Advertising of Home Insulation – Advance Notice of Proposed Rulemaking

Dear Mr. Clark:

In response to the above-referenced Advance Notice of Proposed Rulemaking, these comments are submitted on behalf of the EPS Industry Alliance (herein referred to as “EPS-IA”). EPS-IA is the North American trade association representing member companies engaged in the production and promotion of expanded polystyrene building insulation and construction products.

In this Advance Notice of Proposed Rulemaking, the Commission has presented general and specific questions relating to the R-value Rule and requested input and information. The EPS-IA appreciates this opportunity to submit comments and respectfully requests the Commission to consider the following responses to the those questions:

#### **SPECIFIC QUESTIONS RELATED TO THE R-VALUE RULE**

##### **AGING OF CELLULAR PLASTICS: The Commission should amend the Rule to require ASTM C1303.**

The last round of rulemaking started in 2003 and culminated in the current rule which has been in effect since 2005. Over ten years ago, the EPS-IA requested the Commission to implement the existing, long standing requirement of the Rule that, “[f]or polyurethane, polyisocyanurate, and extruded polystyrene, the [R-value] tests must be done on samples that fully reflect the effect of aging on the product’s R-value,” by adopting test method ASTM C1303. The Commission voiced reluctance to elevate ASTM C1303 to a legal requirement because of concerns regarding the “new” test method, the limited number of laboratories equipped to run the test and its applicability. At this time, ASTM C1303 – Standard Test Method for Predicting Long-Term Thermal Resistance of Closed-Cell Foam Insulation is well established, widely accepted and referenced by the consensus standard authorities in the United States and Canada. As set out in more detail below, the FTC should delete all references to HH-I-530A<sup>1</sup>, make ASTM C1303 a legal requirement and designate the C1303 test method as the method for determining the R-value for products subject to the test.

The Rule still requires, and should continue to require, that samples be tested to reflect the effect of aging on the product’s R-value, in other words, the product’s long term R-value. Aging as it relates to closed-cell foam insulation is defined as, “the change in thermophysical properties of rigid closed-cell foam plastic with time,

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<sup>1</sup> GSA test method HH-I-530A was replaced at some point by HH-I-530B and cancelled as of February 6, 1985.

primarily due to changes in the composition of the gas contained within the closed cells.” (ASTM C1303 section 3.2.1). ASTM C1303 is now well established as the test method for predicting long-term thermal resistance of rigid board insulation incorporating blowing agents other than air. It is administered by a competitive number of laboratories and it has been incorporated into the following ASTM Standards:

- ASTM C578 – Standard Specification for Rigid, Cellular Polystyrene Insulation;
- ASTM C591 – Standard Specification for Unfaced Rigid Cellular Polyisocyanurate Insulation;
- ASTM C1029 – Standard Specification for Spray-Applied Rigid Cellular Polyurethane Thermal Insulation;
- ASTM C1126 – Standard Specification for Faced or Unfaced Rigid Cellular Phenolic Thermal Insulation;
- ASTM C1289 – Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.

The test method described in C1303 is also referenced by the Standards Council of Canada in the following CAN/ULC Standards:

- CAN/ULC S701 – Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering;
- CAN/ULC S704 – Standard for Thermal Insulation, Polyurethane and Polyisocyanurate, Boards, Faced;
- CAN/ULC S705.1 – Standard for Thermal Insulation – Spray Applied Rigid Polyurethane Foam, Medium Density

In the Canadian equivalent of ASTM C578, CAN/ULC S701, reporting long term thermal resistance is a requirement. These developments have occurred because it is documented, established and accepted that the accelerated aging technique prescribed in C1303 is a valid test method for determining the long term thermal resistance of rigid foam insulation incorporating blowing agents other than air.

Earlier stated objections to adoption of C1303 as a legal requirement have been overcome. The test method was first accepted as a consensus test method in 1995, over twenty years ago. Since then, ASTM committees dedicated to the test method have met every six months to share data, propose modifications, increase accuracy and generally improve and verify the test method. Data generated by the test method has been compared to predictive mathematical models and long term verification. It is well accepted that rigid cellular insulation with blowing agents other than air move towards equilibrium as gasses within the cells balance with the gasses outside the cells.

The challenge which has been met by the development of C1303 was to arrive at a method which could predict aged R-value. The full effects of aging on building insulation will be experienced over the service life of the building. ASTM C1303 provides two methods to assess aged R-value: a prescriptive method and a research method. The prescriptive method predicts R-value after 5 years. The research method can be used to calculate R-value at any point in time from the day the insulation is first installed to the end of the service life of the building. Sixty years is a common period for the useful economic life of a home.

**AFFIRMATIVE DISCLOSURES:** The Commission should require affirmative disclosure for insulations that do not deliver the 75°F mean temperature R-value at low mean temperature.

Current building codes often require continuous insulation to meet energy efficiency targets and reduce energy demands. Continuous insulation is an important and growing market sector. Modern building science teaches that continuous insulation functions well and through a variety of climate conditions when installed on the exterior of wall surface between appropriate weather and protective sheathing. In climates where the cold surface will be to the exterior for at least part of the year, the 75°F mean temperature is neither representative of the conditions of use nor will a value based on testing at that high mean temperature be helpful to consumers. In fact, where the typical operating mean temperature is 40°F, information based on

an insulation's performance at 75°F is misleading. Therefore, insulations which deliver reduced R-value when tested at 40°F mean temperature, should be required to affirmatively disclose that fact.

The purpose of the R-value Rule is to provide accurate information to consumers to not only assure that consumers are meeting energy and building code requirements but to allow consumers to make informed decisions about the products they are buying. If one insulation product loses 15% of its R-value at 40°F mean temperature, which has been demonstrated in multiple tests, and another delivers 100% of its stated R-value, failure to require an affirmative disclosure will mislead consumers frustrating the very purpose of the Rule.

Faced with a similar objective, to provide accurate and useful consumer information regarding thermal conductivity, the National Fenestration Rating Council (NFRC) requires that product labels for windows report thermal transmission at 35°F mean temperature. For products like insulation and windows where there is a performance differential between mean temperatures of 35°F and 75°F, consumers should be informed of product performance at typical operating conditions. The 75°F mean temperature is not a representative condition for most consumer applications. Consumers should be provided information on R-value that reflects the product performance in typical operating conditions.

## **GENERAL REGULATORY REVIEW QUESTIONS**

### ***Need***

Buildings consume about 40% of the nation's energy. A building's energy efficiency is greatly influenced by insulation. Modern building science, when applied correctly, can deliver meaningful gains in efficiency and in the health and comfort of the occupants. The selection and incorporation of the correct insulation for the specific application is a critical determinant of whether the efficiency and comfort targets are met.

The Rule is needed now more than ever to assist consumers in gaining the knowledge to make informed decisions.

### ***Benefits and Costs to Consumers***

The Rule benefits consumers by providing an enforceable and uniform baseline to help consumers make the right energy decisions. Although there is much more information necessary for a fully informed choice, thermal resistance is a start and is a valuable common denominator. The consumer could benefit from more required information without information overload.

### ***Benefits and Costs to Industry***

Providing accurate and useful information about an industry's product is essential to the competitive marketplace. Industry has the information and strives to disseminate that information so that consumers make the right decision and are ultimately happy with their choices. The Rule benefits industry by taking on some of the educational mission and by requiring uniform and accurate information in a format that is easy to understand and useful for comparison purposes.

### ***Recommended Changes***

As set out in more detail above, consumers are entitled to more accurate information related to the thermal resistance of the products. Science and testing have evolved since the Rule was last revised and it is time to require reporting a product's aged R-value if aging affects performance. Also, if insulation experiences a

significant (10% or more) change in thermal resistance over the expected range of service temperature, that information should be affirmatively disclosed.

***Impact on Information***

The EPS-IA believes the Rule has had a positive impact on the flow of truthful information to consumers.

***Compliance***

The EPS-IA supports and appreciates the Commission's efforts to enforce compliance.

**CONCLUSION**

The EPS-IA respectfully urges the Commission to substantially enhance the Rule by requiring appropriate disclosures to consumers regarding aging, long-term R-value and low temperature performance.

Sincerely, 

  
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EPS Industry Alliance  
Deputy Director