

September 22, 2003

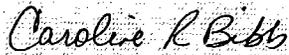
Secretary  
Federal Trade Commission  
Room H-159  
600 Pennsylvania Ave., NW  
Washington, DC 20580

To Whom It May Concern:

On Tuesday, July 15, 2003, the Federal Trade Commission issued a proposed rule that would amend its trade regulation concerning the labeling and advertising of home insulation 68 FR 41872. The Commission solicited comments on the proposed amendments and additional issues. Honeywell International respectfully submits the attached comments on the proposed amendments.

Please contact Mark Lewis at (973) 455-2935 or Mary Bogdan at (716) 827-6269 if you require additional information regarding this issue.

Sincerely,



Caroline Bibb  
Business Director, Specialty Products  
Honeywell Chemicals

**FEDERAL TRADE COMMISSION TRADE REGULATION RULE  
LABELING AND ADVERTISING OF HOME INSULATION: PROPOSED RULE  
16 CFR PART 460**

**COMMENTS  
OF  
Honeywell International**

Honeywell International is a producer and global supplier of several fluorocarbon blowing agents used in the manufacture of closed cell insulation foams including polyurethane, polyisocyanurate, extruded polystyrene and extruded polyethylene products.

Honeywell is submitting comments in the following specific areas:

- **Mean temperature for R-value measurement**
- **Use of long term aging methods**
- **Inclusion of new products in rule**

**Mean temperature for R-value measurement**

Part XII (§ 460.5(a) R-value Tests) – requires R-value tests to be conducted with a mean temperature differential of 50°F plus or minus 10°F in addition to the current Rule requirement of testing at 75°F mean temperature.

Honeywell agrees with the use of a mean temperature differential of 50°F plus or minus 10°F, but believes that the inclusion of a lower mean temperature is necessary to insure that consumers will use an adequate amount of insulation in cold temperature regions of the US.

Thermal conductivity is a measurement of the amount of heat that passes through a unit thickness of material, over a unit area in one hour, if the temperature differential between the “hot” and “cold” sides is one degree. R-value is the inverse of thermal conductivity, i.e. the higher the R-value the more effective the insulation. In 1964, Saunders and Frisch<sup>1</sup> reported that mean temperature, defined as the average of the hot and cold plate temperatures, has an effect on the thermal conductivity of rigid polyurethane foams. In fact, Figure 27 of this reference illustrates the thermal conductivity vs. mean temperature curve for a fluorocarbon blown foam from -120° C to 80° C, which is non linear. Therefore, it is important when insulating a structure to determine the mean temperature that a wall or roof assembly will be exposed to.

Until recently, most k-factors have been measured and reported at a mean temperature (average of hot and cold side) of 75°F. This was done since most equipment was set at this mean temperature and was difficult to change. Equipment has since improved and now thermal conductivity readings at multiple mean temperatures can be easily performed on a single sample. ASTM standards such as ASTM C 1289 have long recognized not only the importance of specifying the mean temperature when predicting thermal performance of an insulating material

---

<sup>1</sup> Saunders, J. H., Frisch, K. C., 1964. “Polyurethanes: Chemistry and Technology, Part II”, p 251-258.

but also that a mean temperature of 75°F may not be adequate to predict the amount of insulation necessary in all environments. This is why ASTM C 1289<sup>ii</sup> not only specifies data at a mean temperature of 75°F but also 40°F and 110°F. To more adequately represent insulation requirements of their geographic region, the European Union specifies a mean temperature of 50°F. This geographic region has a climate similar to that of the northern regions of the US.

Honeywell recommends that testing at a mean temperature of 40°F be included in the rule in addition to a mean temperature of 75°F.

### **Use of long term aging methods**

#### Part XII (§ 460.5(a)(1) Aging of Cellular Plastics)

The FTC rule refers to the use of ASTM 1303 and Canadian S 770 as foam aging procedures. It is important to note that these procedures are both designed to predict the aging of permeable faced products tested at a mean temperature of 75°F. There is significant data presented in the literature on the use of this method on permeable faced boardstock. The limitation of the procedure however is that it is designed to predict the aging of foam at a mean temperature of 75°F. All test results published to date were performed at a mean temperature of 75°F. Honeywell supports the inclusion of Canadian S770 as a foam aging procedure to report the R-value on permeable faced boardstock at mean temperature of 75°F.

Honeywell recognizes that at this time there is no generally accepted procedure to predict the aging of unfaced spray applied polyurethane foam products, or impermeably faced products. Until a method is developed and validated for these materials Honeywell recommends the use of the 180-day lab-conditioned method. This recommendation is in agreement with the current ASTM standards for these products.

Honeywell supports the inclusion of R-value measurements at 40°F. At this time there is no generally accepted or validated procedure to predict foam aging. Until a method is developed and validated for 40°F, Honeywell recommends the use of the 180-day lab-conditioned method to report R-values at this temperature. This recommendation is in agreement with the current ASTM standards for these products.

### **Inclusion of new products in rule**

Honeywell recommends the inclusion of polyisocyanurate spray-in-place insulation. The manufacturer as “a state-of-the-art, soft foam insulation that is sprayed into walls, floors and ceilings”, defines this. Polyisocyanurate is currently being sold as a home insulation product.

Honeywell urges the Commission to specifically designate polyisocyanurate in the Rule. This will remove any doubt that this product is subject to FTC regulations.

---

<sup>ii</sup> ASTM C 1289-02, “Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.”