

Updates to the 2018 I-Codes Spray Foam Requirements



ANTITRUST POLICY STATEMENT FOR SPRAY POLYURETHANE FOAM ALLIANCE MEETINGS

- ▶ It is and shall remain the policy of the Spray Polyurethane Foam Alliance ("SPFA"), and it is the continuing responsibility of every SPFA member company, SPFA meeting or event participant, as well as SPFA staff and leadership to comply in all respects with federal and state antitrust laws. No activity or discussion at any SPFA meeting or other function may be engaged in for the purpose of bringing about any understanding or agreement among members to (1) raise, lower or stabilize prices; (2) regulate production; (3) allocate markets; (4) encourage boycotts; (5) foster unfair or deceptive trade practices; (6) assist in monopolization; or (7) in any way violate or give the appearance of violating federal or state antitrust laws.
- ▶ Any concerns or questions regarding the meaning or applicability of this policy, as well as any concerns regarding activities or discussions at SPFA meetings should be promptly brought to the attention of SPFA's Executive Director and/or its legal counsel.



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Welcome to My World

- ▶ Product Performance Characteristics
- ▶ Issues
- ▶ Stakeholders
 - ▶ Influencers
 - ▶ Allies
 - ▶ Others
- ▶ Venues





Hearings... Stakeholders...



Hearings... Stakeholders...



Responsible Advocacy...



Product Performance

- ▶ Thermal Resistance
- ▶ Air and Vapor Permeance
- ▶ Structural Effects
- ▶ Sound Transmission Resistance



Issues

- ▶ Energy Efficiency
 - ▶ R-Value
 - ▶ Air Barrier
- ▶ Building Performance
 - ▶ Moisture Management
- ▶ Wind Resistance
 - ▶ SPF Contribution
- ▶ Sustainable Building Design
 - ▶ Noise Reduction



Issues

- ▶ Moisture Management
 - ▶ Condensation
 - ▶ Unintended Water
- ▶ Fire Performance
 - ▶ Thermal Barrier
- ▶ Chemicals of Concern
 - ▶ Flame Retardant Chemicals



Stakeholders: Influencers

- ▶ Governmental Entities
 - ▶ National (DOE, EPA, etc.)
 - ▶ State and Local
- ▶ Research Groups
 - ▶ National Labs
 - ▶ University Projects
- ▶ Building Owners
 - ▶ BOMA, GSA
- ▶ Building Designers
 - ▶ AIA, NCSEA



Stakeholders: Influencers

- ▶ NGOs
 - ▶ USGBC (US Green Building Council)
 - ▶ Sierra Club
 - ▶ NRDC (National Resource Defense Council)
- ▶ Governmental Representatives
 - ▶ US DOE and EPA
 - ▶ ICC Code Official Chapters
 - ▶ State Councils



Stakeholders: Allies

- ▶ American Chemistry Council
 - ▶ SFC, FSC
- ▶ Foam Plastics Groups
 - ▶ PIMA, XPSA, EIA, EPSMA
- ▶ Energy Efficiency Groups
 - ▶ EECC (Energy Efficient Codes Coalition)
 - ▶ ASE (Alliance to Save Energy)
 - ▶ ACEEE (American Council for an Energy Efficient Economy)
 - ▶ Regional Energy Efficiency Groups



Stakeholders: Others

- ▶ Industry Trade Groups
 - ▶ NAIMA
- ▶ Environmental Groups
 - ▶ Issue Dependent
- ▶ Research Entities
- ▶ Builders
 - ▶ NAHB
 - ▶ LBA (Leading Builders of America)



Venues

- ▶ Model Codes Developers
 - ▶ ICC
 - ▶ ASHRAE
 - ▶ NAHB
- ▶ Product Standards Developers
 - ▶ ASTM
 - ▶ NFPA



Venues

- ▶ State Code Adoption Processes
 - ▶ Florida Building Commission
 - ▶ California Title 24
- ▶ State Rulemaking
 - ▶ California AB 127
- ▶ Federal Rulemaking
 - ▶ EPA



What's On Our Plate?

- ▶ (ICC) International Code Council
 - ▶ Group "A": Fire Safety and Moisture Management Code Requirements
 - ▶ Prep for Group "B" in 2019: Energy Efficiency and Residential Building
 - ▶ Issues For this Code Cycle:
 - ▶ Fire Safety
 - ▶ Vapor Barriers
 - ▶ Energy Efficiency



Big Change for 2018: Buried Ducts

- ▶ IECC R403.3.6 Ducts buried within ceiling insulation
 - ▶ Ducts that are tested to have a maximum leakage rate of 1.5 cfm25/100 sq. ft. to the outside, are insulated with \geq R-8 insulation, and have at least R-19 insulation above and to the sides of the ducts, count as being in conditioned space.



R403.3.6 Buried Ducts

R403.3.6 Ducts buried within ceiling insulation. Where supply and return air ducts are partially or completely buried in ceiling insulation, such ducts shall comply with all of the following:

1. The supply and return ducts shall have an insulation *R*-value not less than R-8.
2. At all points along each duct, the sum of the ceiling insulation *R*-value against and above the top of the duct, and against and below the bottom of the duct, shall be not less than R-19, excluding the *R*-value of the duct insulation.
3. In *Climate Zones* 1A, 2A and 3A, the supply ducts shall be completely buried within ceiling insulation, insulated to an *R*-value of not less than R-13 and in compliance with the vapor retarder requirements of Section 604.11 of the *International Mechanical Code* or Section M1601.4.6 of the *International Residential Code*, as applicable.

Exception: Sections of the supply duct that are less than 3 feet (914 mm) from the supply outlet shall not be required to comply with these requirements.



R403.3.6 Buried Ducts

R403.3.6.1 Effective *R*-value of deeply buried ducts.

Where using a simulated energy performance analysis, sections of ducts that are: installed in accordance with Section R403.3.6; located directly on, or within 5.5 inches (140 mm) of the ceiling; surrounded with blown-in attic insulation having an *R*-value of R-30 or greater and located such that the top of the duct is not less than 3.5 inches (89 mm) below the top of the insulation, shall be considered as having an effective duct insulation *R*-value of R-25.



Another Big Change for 2018: HERS Ratings

- ▶ RESNET 301 is Included in 2018 IECC
- ▶ Limits Insulation Trade Off for Renewable Energy Sources Including Rooftop Solar PV
 - ▶ The Fact That the Energy Source is Renewable Doesn't Mean We Should Waste It....
 - ▶ Solar Subsidies Are Intended to Save Energy NOT to Deselect Insulation
- ▶ Expect Some Tweaks Next Year



Likely ICC Proposals

- ▶ NAIMA: Air-Permeable Insulation Provisions for Unvented Attics in the IBC
- ▶ Foam Sheathing Committee
 - ▶ Air Barrier Requirements
 - ▶ Vapor Retarder Requirements
 - ▶ Continuous vs. Cavity
- ▶ Other Groups?
 - ▶ Fire Safety



CPI ICC Proposals

- ▶ Clarifying Use of Cavity and Continuous Insulation or Hybrid for Condensation Control
- ▶ Clarifying “Thermal Barrier” for Radiant Floors
- ▶ Correlating FS and SD Test Requirements to ASTM E84 for Duct Coverings



Summary....

- ▶ Responsible Advocacy
 - ▶ Issues Management: Multiple Fronts
 - ▶ Sound Technical Arguments
- ▶ Coordinated Efforts
 - ▶ Allies and Coalitions
 - ▶ Product Neutral Positioning
 - ▶ Performance-Based Regulation



Summary....

- ▶ Air Barrier *Performance*
- ▶ Thermal *Performance*
- ▶ Structural and Sound *Performance*
- ▶ Energy Efficiency *Performance*



Q&A

Thanks For Your Attention!

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