Interested Parties
Reflective Insulation and The Florida Building Code

Greetings,

This letter concerns the insulation product rating for Reflective Insulation product mShield manufactured by Fi-Foil Company located in Auburndale, Florida. The Florida Building Code-Energy Conservation 6th Edition (2017) R303.1.1.1 states that "The Thermal Resistance (R-value) of insulation shall be determined in accordance with the U.S. Federal Trade Commission R-value rule (CFR Title 16, Part 460) in units of $h \cdot ft^2 \cdot °F/Btu$ at a mean temperature of 75°F (24°C)."

CFR Title 16, Part 460 §460.5 paragraph (c) requires R-value tests for reflective insulation systems be performed in accordance with ASTM test method C1363-11 with a test panel constructed according to ASTM C1224-15.

Reflective insulation identified as mShield manufactured by Fi-Foil Company located in Auburndale, Florida has been tested according to the Federal Trade Commission requirements by CAN-BEST (Canadian Building Envelope Science and Technology) a laboratory located in Brampton, Ontario, Canada that is accredited in accordance with ISO 17025.

I have reviewed the CAN-BEST report number L20-1368-5820c dated September24, 2020 that was provided to me by Fi-Foil Company. Test report L20-1368-5820c contains the result: Thermal Resistance (R-value) of 4.2 $h \cdot °F \cdot ft^2/Btu$ for mShield. The R-value result 4.2 $h \cdot °F \cdot ft^2/Btu$ was obtained at a cavity mean temperature of 72.1°F and a temperature difference (ΔT) across the insulated cavity of 30.0°F. These test conditions satisfy the requirements in section 9.7.3 of ASTM C1224 (T_{mean} = 75 +/- 4 °F and ΔT = 30 +/- 2 °F). The cavity depth for this test was 0.75 inches which is the thickness of the furring. The reflective insulation was mounted on nominal 1 by 2 inch furring that was spaced 16 inches on-center.

The product R-value declared by Fi-Foil Company is 4.1 $h \cdot °F \cdot ft^2/Btu$ for the system tested. It is my opinion that the test report identified above validates the F-Foil Product R-value claim.

Respectfully,

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