Ted Medford
AirTight Insulation, Inc.
145 Newborn Road
Rutledge, GA 30663

Building Inspector

RE: Application of AirTight Sprayfoam and questions that may arise from a code officials' standpoint.

Dear Building Inspector,

Section One: Product Description

AirTight Sprayfoam is a two component sprayed-in-place polyurethane foam which is designed for the application of building envelopes in order to provide a thermal barrier, structural integrity, an acoustical barrier, a vapor barrier and an "airtight" membrane. The product is unlike any other insulation material on the market in that it does not rely on trapping still air to reduce the transfer of hot or cold air. Every cubic inch of AirTight Sprayfoam has over (1.5) million closed gas cells that provide twice the R-value of open cell insulation. Much like rubber will not conduct electrical current, these gas cells will not conduct heat or cold transfer. A good analogy of this is a Styrofoam cup. You can pour(180) degree coffee into a Styrofoam cup that is only 1/8" thick and hold it in your hand without getting burned. AirTight Sprayfoam is applied at a 2 or 2 ½ " average and can stop temperatures in excess of 200 degrees F and down to -30 degrees F from passing through the product.

Section Two: Thickness

AirTight Sprayfoam dealers are trained to install our product at a 2" average on exterior walls and a 2 ½ " average on roof decks. Acceptable thickness for a 2" average would be 1 ½" – 2 ½". Acceptable thickness for a 2 ½" average would be 2" – 3". The idea behind average thickness is to have as many or more places that are the target thickness. If you have a wall (or roof deck) that has as many places that are equal to or greater than your target thickness then the coefficiency of that wall will be as specified. Meaning, hypothetically, if heat can travel faster through a 1 ½" spot and slower through a 2 ½" spot then we can achieve our desired thermal resistance for the complete area of the wall by maintaining an average thickness.

Section Three: Thermal Performance

Because AirTight Sprayfoam is a true thermal barrier, spraying increased thicknesses to achieve higher R-Values is not necessary. The thermal performance of the product is the

same at 2 ½" (R-19) as it is at 4" (R-30). Any thickness sprayed beyond 2 1/2 " average has reached a point of diminishing return.

*See chart on page (3) of the AirTight Sprayfoam Brochure

Section Four: Non-vented Roof Systems

The idea behind a ventilated roof is to try to exhaust heat out of the attic space. The problem with this system is that no matter how much ventilation we install, attic temperatures still routinely exceed 130 degrees. Damage to roofing materials begin when the interior attic temperatures exceeds the surface temperature of the shingles. By installing AirTight Sprayfoam directly to the roof decking, we are eliminating the transfer of heat into the attic space; thus, creating a semi conditioned space. We have gained approvals from both Elk Shingle Company and Certaineed for this application. Also, the international building code accepts non-ventilated attic systems.

*See Non-Vented Roof System on pages 5-6 of the AirTight Sprayfoam Brochure

Section Five: AirTight Dealers

AirTight Insulation trains all of our dealers on the application of our product. Furthermore, AirTight Insulation stands behind our applicators and guarantees that the product will perform as stated on our spec data sheet and all of our printed materials. Our application process works as well in hot climates as it does in cold climates, and is a proven method of insulating any structure.

If you should have any further questions or concerns please contact me direct @ (800) 995-9466.

Sincerely,

Ted J. Medford
President, AirTight Insulation