

## **Technical Bulletin 4-07R**

### *Windload Performance of Inspire Roof Tiles*

Inspire roof tiles have been tested and have passed all requirements in accordance with Miami-Dade County Protocol *TAS 100-95 –Test Procedure for Wind and Wind Driven Rain Resistance of Discontinuous Roof Systems*. For general information, this protocol is designed to test roofing products at wind speeds equivalent to 110 mph.

As a result of additional calculations, increased windload capacities for Inspire Roofing Tiles Board are determined to be as follows:

#### **Oriented Strand Board**

##### 7" Exposure

120 MPH \* all roof zones-\*\*exposure B up to a max mean roof height of 45'

110 MPH \* all roof zones-\*\*exposure C up to a max mean roof height of 20'

##### 7.5" Exposure

120 MPH \* for all roof zones-\*\*exposure B up to a max mean roof height of 35'

110 MPH \* for all zones- \*\*exposure C up to a max mean roof height of 15' \*\*

#### **1/2" Plywood**

##### 7" Exposure

130 MPH \* for all roof zones - \*\*exposure C up to a max mean roof height of 60'

140 MPH \* for all roof zones - \*\*exposure C up to a max mean roof height of 50'

150 MPH \*for all roof zones - \*\*\*exposure B up to a max mean roof height of 60' and \*\*exposure C up to a max mean roof height of 25'

##### 7.5" Exposure

130 MPH \*wind zone areas, for all roof zones - \*\*exposure C up to a max mean roof height of 60'

140 MPH \*wind zone areas, for all roof zones - \*\*exposure C up to a max mean roof height of 35'

150 MPH \*wind zone areas, \*\*\*exposure B up to a max mean roof height of 60' and \*\*exposure C up to a max mean roof height of 20'

Based on calculations, Inspire Roofing Tiles are approved for installation in all US coastal zones outside Miami-Dade County Jurisdiction – including but not limited to The 2007 Florida Building, and The Texas Department of Insurance jurisdictions.

The roof tile test applications were performed using galvanized, ring shank nails (minimum 1.5" in length with 1/8" diameter shank, and 3/8" diameter head) on a minimum slope roof deck of 4:12. The windspeed requirements were calculated from an allowable design windload uplift load of 129.6 psf for Class A Tiles (7" exposure) and 123.1 for Class C Tiles (7.5" exposure

For applications of the Inspire Roofing Tiles installed at a 6" exposure, anticipated design windload uplift load will increase by approximately 25% or 30 psf.

For specific application questions related to installations of tiles at <7", please direct your inquiries to [Matt Michalski, Product Specialist, Inspire \(matt\\_michalski@tapcoint.com\)](mailto:matt_michalski@tapcoint.com).

*\*Wind zone areas are defined as Basic Windspeed in MPH determined by American Society of Civil Engineers (ASCE) 7-98 – Minimum design load for Buildings and Other Structures*

*\*\*Exposure C – defined by code as open terrain with scattered obstructions*

*\*\*\*Exposure B - defined by code as urban and suburban also to encompass wooded areas*