
TECHNICAL BULLETIN

UNDERSTANDING WIND UPLIFT IN ROOF DECK APPLICATIONS

Tropical Forest Products Roof Deck Products use cutting-edge technologies like proprietary conventional decking products, expanded wood species, deck tile dimensional selections, pressure-fit pin attachment, post-installation height adjustment, and self-leveling pedestal technology.

Tropical Forest Products Roof Decking Products have been supplied on a large volume of roof deck projects throughout the United States with no reports of uplift damage. Because of their superior design characteristics and technologies, our systems are consistently approved (or equal) in roof deck tile, decking, and pedestal specifications.

Class A Fire Rated Tropical Forest Products Deck Tiles fall within the category of Limited Combustible materials. This is the same category associated with Fire-Treated Wood.

Class 1 Durability rated and fabricated with stainless steel fasteners; Tropical Forest Products deck tiles provide the same exceptional service life associated with our conventional decking products.

Tropical Forest Products Decking, Deck Tile, and Pedestal System rely on gravity, perimeter containment, and mechanical connections subject to wind uplift requirements. The Tropical Forest Products Roof Deck, Deck Tile, and Pedestal System create a pressure-equalizing air and water permeable deck which equalizes uplift forces and restrains movement through the combination of ballast (weight), pressure equalization, and, in more extreme uplift environments, mechanical connections.

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While the IBC code that went into effect in 2012 increased allowable wind speeds in all areas, unfortunately, no IBC or ICC-ES acceptance criteria or specific ASTM test protocol for roof deck tile, decking, and pedestal applications exist to date. An ASTM TAS 108 test protocol exists for testing air permeable ridged discontinuous roof systems (clay and concrete roof tiles/shingles), which some system manufacturers reference or use as a form of specification control. Still, this test protocol is not recognized by the ICC-ES relative to roof deck tile, decking, and pedestal systems as there is no physical attachment of the pedestals and subsequent system to the roof substrate as required under the test protocol. As such, it would be difficult, if not impossible, to test for all circumstances and contingencies.

We must rely on engineering to validate product performance under various wind uplift conditions. This engineering data is available in the form of Tropical Forest Products Guides, which have been stamped in the state of Florida, which is known for its stringent standards. These guides assist the designers in the specification process and the code officials in the approval process and should be relied on as part of any submittal process.

This technical bulletin is intended to provide the most current information on roof decks and wind lift. It is not intended as a guarantee or warranty of any kind, including but not limited to warranties of merchantability or fitness for a particular purpose. None of the information in this technical bulletin is intended to substitute for the engineers, specifiers, architects, builders, contractors, or owner's analysis, investigation, and due diligence regarding the appropriate choice, application, installation, and construction of a Tropical Forest Products Roof Deck Tile, Decking, and Pedestal System in any particular location or application.