

**Project #9820****Testing Weathermaster Ultimate MP and Titegrab Plus on Evolution Steel Deck Frame and Outdoor Tile (Fortress Building Products)****Background**

The Construction Technical Service Group received a project request from a customer at Fortress Building Products to conduct performance testing on new deck materials submitted to the lab. The lab conducted adhesion-in-peel testing with Weathermaster Ultimate MP and Titegrab.

**Executive Summary**

Weathermaster Ultimate MP and Titegrab Plus were subjected to peel testing on Evolution steel deck frame and outdoor tile submitted to the lab. The average peel strength for both Weathermaster Ultimate MP and Titegrab Plus indicated good adhesion to the substrates. Weathermaster Ultimate MP and Titegrab are good recommendations for applications using Evolution steel deck frame and outdoor tile.

**Adhesive/Sealant:**

- Weathermaster Ultimate MP Sealant
- Titegrab Plus Construction Adhesive

**Substrates:**

- Evolution Steel Deck Frame (by Fortress Building Products)
- Outdoor tiles



Fig 1: Steel deck frame with outdoor tiles positioned on top.



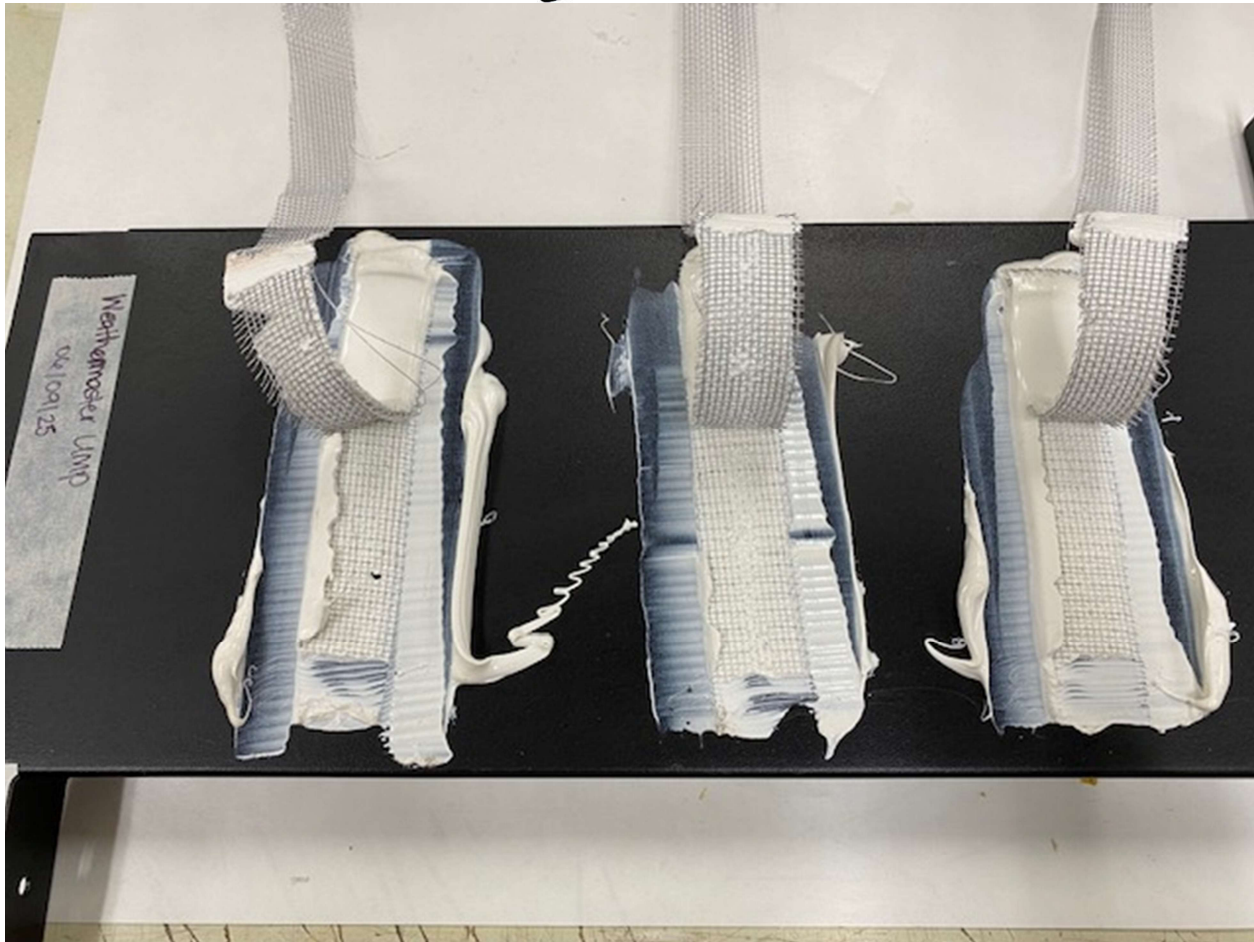
#### ASTM C794 Adhesion-In-Peel Test

A 2mm film of each sealant/adhesive was applied to a 1 x 6-inch area of steel frame and outdoor tile using a tooling device as stated by ASTM C-794. A 1 x 12-inch piece of wire mesh was imbedded in the 2mm film of sealant/adhesive, and a second film of sealant (4mm) was applied over the wire mesh. The samples were allowed to be cured at room temperature (75°F, 45% RH) for 1 week. After 1 week, the samples were tested on the MTS machine for peel strength.

**Table 1. Average Peel Strength (lbf)**

	Weathermaster Ultimate MP	Titegrab Plus
Evolution Steel Frame	16.615	15.988
Outdoor Tile	17.047	14.829

lbf stands for pounds-force. It is a unit of force, specifically the force exerted by gravity on a mass of one pound at standard gravity.



**Fig 2.** Post test: Picture showing cohesive failure for Weathermaster on the steel deck frame. Good adhesion to the substrate.



**Fig 3.** Post test: Picture showing cohesive failure for Titegrab on steel deck frame. Good adhesion to the frame.



**Fig 4.** Post test: Picture showing cohesive failure for Weathermaster on outdoor tile. Good adhesion to the outdoor tile.



**Fig 5.** Post test: Picture showing cohesive failure for Titegrab on outdoor tile. Good adhesion to the outdoor tile.

Please feel free to reach out if you have any questions or concerns about the results provided.

Thank you,

Titebond Technical Support Team

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