



**EVALUATION REPORT**

**FLORIDA BUILDING CODE, 8<sup>TH</sup> EDITION (2023)**

**Manufacturer:** MCGUIRE ROOFING PRODUCTS LLC  
10685 King William Drive  
Dallas, TX 75220  
(942) 694-3324  
[www.mcguireroofs.com](http://www.mcguireroofs.com)

*Issued February 28, 2025*

**Manufacturing Plants:** Suzhou, China

**Quality Assurance:** FM Approvals (QUA1860)

**SCOPE**

**Category:** Roofing  
**Subcategory:** Single Ply Roof System  
**Code Edition:** Florida Building Code, 8<sup>th</sup> Edition (2023) including High-Velocity Hurricane Zones (HVHZ)  
**Code Sections:** 1504.3.1, 1504.6, 1504.7, 1507.12, 1515.1.1, 1515.2.4, 1523.1.1, 1523.6.2  
**Properties:** Wind Resistance, Impact Resistance, Physical Properties

**REFERENCES**

| <u>Entity</u>                                     | <u>Report No.</u> | <u>Standard</u> | <u>Year</u> |
|---------------------------------------------------|-------------------|-----------------|-------------|
| FM Approvals (TST1867)                            | PR461801          | FM 4470         | 2016        |
| PRI Construction Materials Technologies (TST5878) | 2597T0006.1       | ASTM D 6878     | 2021        |
|                                                   |                   | TAS 110         | 2000        |

**PRODUCT DESCRIPTION**

| Products                       | Specification | Description                                                                                                |
|--------------------------------|---------------|------------------------------------------------------------------------------------------------------------|
| FlexGuard® TPO 60-mil Membrane | ASTM D 6878   | 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with PET mesh reinforcement |

**LIMITATIONS**

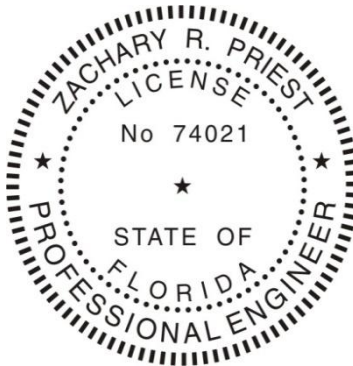
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1. Fire classification is not within the scope of this evaluation.
2. Foam plastic insulation shall be separated from the building interior in accordance with the FBC 2603.4 and 2603.6.
3. The roof deck and the roof deck attachment information are provided based on testing. FBC requirements for the rational design of the roof deck, including the attachment, are not within the scope of this evaluation.
4. In the HVHZ, fastener spacing for insulation attachment is determined using a Minimum Characteristic Force (F') of 275 lbf as demonstrated via testing to TAS 105. If the field tested fastener value is below 275 lbf, then insulation attachment shall not be acceptable.
5. In the HVHZ, fastener spacing for base sheets or membrane attachment shall meet the minimum fastener resistance value and the *MDP* for the specified assembly. It is permissible for a qualified professional to submit a revised fastener spacing utilizing the withdrawal resistance value obtained from TAS 105 testing and calculations performed in accordance with RAS 117 and/or RAS 137, when the fastener resistance is found less than required.
6. In the HVHZ, if mechanical attachment through the lightweight insulating concrete to the structural deck is proposed, a field fastener withdrawal test shall be conducted in compliance with TAS 105 to determine equivalent or increased attachment densities. Revised fastener densities shall be submitted utilizing the withdrawal resistance value obtained from TAS 105 testing and calculations performed in accordance with RAS 117 and/or RAS 137.
7. **HVHZ:** For assemblies containing mechanical attachment, the allowable uplift pressure for the selected assembly shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16. The attachment density may be increased by a qualified design professional, as necessary, to meet the design pressure requirements in the periphery zones. Calculations shall be conducted in compliance with RAS 117 and/or RAS 137.  
**Non-HVHZ:** For assemblies containing mechanical attachment or adhered in ribbon-applied adhesive, the allowable uplift pressure for the selected assembly shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16. The attachment density may be increased by a qualified design professional, as necessary, to meet the design pressure requirements in the periphery zones. Calculations shall be conducted in compliance with RAS 117, RAS 137, or Section 2.2.10.1 FM LPDS 1-29 (February 2020).
8. Reroofing applications shall be examined in accordance with FBC Section 1511 outside of the HVHZ and FBC Section 1521 within the HVHZ. For mechanically fastened systems, a field withdrawal resistance test (TAS 105 in the HVHZ; ANSI/SPRI FX-1 or TAS 105 in the non-HVHZ) shall be conducted by a qualified professional to ensure the fastener meets the minimum design load requirements of the system. For adhered systems, a field uplift resistance test (TAS 124 in the HVHZ; ASTM E 907, FM LPDS 1-52, ANSI/SPRI IA-1, or TAS 124 in the non-HVHZ) shall be conducted to confirm conformance of the existing substrate to the minimum design loads.
9. **HVHZ:** For assemblies containing fully adhered or ribbon adhered attachment, or where extrapolation of the assembly is not permitted, the *MDP* for the selected assembly shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16 without augmentation.  
**Non-HVHZ:** For assemblies adhered in ribbon-applied adhesive, the allowable uplift pressure for the selected assembly shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16. The attachment density may be increased by a qualified design professional, as necessary, to meet the design pressure requirements in the periphery zones. Calculations shall be conducted in compliance with Section 2.2.10.1 FM LPDS 1-29 (July 2022).
10. Installation of the evaluated products shall comply with this report, the FBC, and the manufacturer's published application instructions. Where discrepancies exist between these sources, the more restrictive and FBC compliant installation detail shall prevail.
11. The minimum roof slope shall be 1/4:12 for new construction.
12. All products listed in this report shall be manufactured under a quality assurance program in compliance with Rule 61G20-3.
13. Fasteners applied in rows may impart concentrated loads to structural components of the building. Designers should consider the fastener spacing of the roof system in relation to the spacing of structural supports when selecting a roof system.

## COMPLIANCE STATEMENT

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This report has been prepared in accordance with F.A.C. Rule 61G20-3.



This item has been  
digitally signed and  
sealed by Zachary R.  
Priest, PE, on 2/28/2025.

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CREEK Technical Services, LLC

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Zachary R. Priest, P.E.  
Florida Registration No. 74021  
Organization No. ANE9641

## CERTIFICATION OF INDEPENDENCE

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CREEK Technical Services, LLC does not have, nor will it acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

CREEK Technical Services, LLC is not owned, operated, or controlled by any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

## APPENDICES

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- 1) APPENDIX A – Installation (1 pages)
- 2) APPENDIX B – Nomenclature and Approved Assemblies (1 pages)

**INSTALLATION**

*Note - Refer to the [APPROVED ASSEMBLIES](#) section of this report for specific installation details of a selected assembly.*

Unless otherwise specified in this report the following installation details shall be met for the named products:

| Component            | Product                    | Installation Detail                                                                                                                                                                                 |
|----------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fasteners & Plates   | CinchTech™ Seam Plate      | 60mm diameter; 0.8mm Galvalume steel, seam plate w/eyehooks                                                                                                                                         |
|                      | CinchTech™ HD Fastener #14 | #14 fastener; Min. 0.75-inch penetration through the top rib of the steel deck                                                                                                                      |
| Single-Ply Membranes | FlexGuard® TPO             | Min. 4.7-inch (120mm) wide side-laps with min. 1.6-inch (40mm) wide heat weld; Side-laps shall be installed perpendicular to the direction of the steel deck ribs for mechanically attached systems |

## APPROVED ASSEMBLIES

The following notes shall be observed when using the assembly tables below.

1. Allowable maximum design pressures (*MDP*) were calculated using a 2:1 margin of safety per FBC Section 1504.9 and 1523.4. *MDP* shall be minimum -45 psf for use in the HVHZ.
2. Refer to [LIMITATIONS](#) sections of this evaluation when using the table(s) below.
3. Refer to [INSTALLATION](#) section of this report for installation detail when the information is not explicitly stated for the selected assembly.
4. The on-center (o.c.) spacing given is the maximum allowable attachment spacing for the rated system.
5. *As Tested* information for roof deck construction is provided for information only. The addition of the *As Tested* deck information does not obviate the requirement for rational design of the roof deck and roof deck attachment in accordance with FBC requirements.

| Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover) |                                                                                                                                                                                                                         |                                          |               |                                                                                                                      |                         |
|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------|-------------------------|
| System No.                                                                   | <i>As Tested</i> Deck Detail                                                                                                                                                                                            | Insulation                               | Membrane      | Membrane Attachment                                                                                                  | <i>MDP</i> (psf)        |
| S-M-1                                                                        | Min. 22ga., Grade 33, Type B, wide rib steel deck secured to structural supports spaced a 74-inch o.c. with one (1) #12-24 HWH self-driller spaced 6-inch o.c.; Side laps fastened 30-inch o.c. with approved fasteners | Min. 1.6-inch EPS or approved insulation | FlexGuard TPO | Attached in-lap 6-inch o.c. with CinchTech HD Fasteners #14 and CinchTech Seam Plates; Side laps spaced 74-inch o.c. | <b>-60<br/>(Lim. 7)</b> |

END OF REPORT