

## Evaluation Report

**"MetalMan HT-60"**

**Roof Underlayment**

**Manufacturer:**

**Englert, Inc.**

**1200 Amboy Avenue**

**Perth Amboy, NJ 08862**

**(732) 826-8614**

*for*

**Florida Product Approval**

**# FL 11351.2 R7**

**Florida Building Code 7th Edition (2020)**

**Method: 1 - D**

**Category: Roofing**

**Sub - Category: Underlayment**

**Product: MetalMan HT-60**

**Product Typel: SBS Self-Adhered Roof Underlayment**

**Prepared by:**

James L. Buckner, P.E., SECB

Florida Professional Engineer # 31242

Florida Evaluation ANE ID: 1916

Project Manager: Diana Galloway

Report No. 20-234-HT60-ER

*(Revises 17-135-HT60-ER, FL11351.2 R6)*

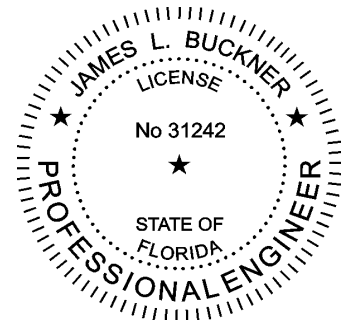
Date: 9 / 10 / 20

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This item has been electronically signed and sealed by James L. Buckner, P.E., on this date using a Digital Signature. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.



A handwritten signature in blue ink, appearing to read "James L. Buckner".

**Manufacturer:**

**Englert, Inc.**

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|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:                 | "MetalMan HT-60"                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Product Category:             | Roofing                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Product Sub-Category          | Underlayment                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Compliance Method:            | State Product Approval Rule 61G20-3.005 (1) (d)                                                                                                                                                                                                                                                                                                                                                                                   |
| Product Description:          | "MetalMan HT-60" is a SBS modified self-adhering membrane composed of non-woven fiberglass-mat reinforcement, modified asphalt and a polyester fabric surface with a release liner and is designed for use as a roof underlayment in metal roof system applications.                                                                                                                                                              |
| Product Material / Standards: | Material Type: Styrene Butadiene Styrene (SBS)<br>Material shall comply with ASTM D 1970 per Florida Building Code (FBC), 7th Edition (2020), Chapter 15.                                                                                                                                                                                                                                                                         |
| Product Dimension(s)          | Roll Size(s): 36 in. x 33.4 ft. rolls<br>36 in. x 66.8 ft. rolls<br>Thickness: 60 mils (nominal)                                                                                                                                                                                                                                                                                                                                  |
| Substrate(s):                 | Type:<br>Plywood Deck<br>(Design of substrate outside the scope of this evaluation.)                                                                                                                                                                                                                                                                                                                                              |
| Installation:                 | Installation Instructions:<br>(Refer to the end of this evaluation report.)<br><br>Installation shall comply with FBC Section 1507.1.1, applicable code sections of the current FBC, and in accordance with the installation method described herein subject to the Limitations and Conditions of Use listed in this Evaluation Report. Refer to manufacturer's installation instructions as a supplemental guide for attachment. |
| Quality Assurance:            | The manufacturer has demonstrated compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.0005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through By UL, LLC (FBC Organization ID# QUA 9625).                                                                                                                                |
| Performance Standards:        | The product described herein has been tested in accordance with:                                                                                                                                                                                                                                                                                                                                                                  |

- **ASTM D 1970-15** – *Specification Self-adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roof Underlayment for Ice Dam Protection*

**Standards Equivalency:** The ASTM D 1970-01 standard version used to test the product meets the prescribed standards in ASTM D 1970-15 standard version adopted by the Florida Building Code 7th Edition (2020) for use as evaluated in this report.

**Code Compliance:** The product(s) described herein have demonstrated compliance with the performance standards listed above as referenced in the current Florida Building Code.

**Evaluation Report Scope:** This product has been evaluated in compliance with the building envelope requirements of the Florida Building Code, as related to the scope section of Florida Product Approval Rule 61G20-3.001.

**Product Limitations and Conditions of Use:**

- Deck shall be in compliance with applicable building code.
- Product is evaluated for use with approved roof coverings that are mechanically fastened through the underlayment and is attached to the sheathing or rafters. Use of this product with tile roof installation shall comply with FBC 1507.3.3 and 1507.3.3.1.
- Product is acceptable for use with any roof covering system which specifically references product in the FBC approval. If not listed, an application may be submitted to the local building jurisdiction for approval based on this evaluation combined with supporting data for the roof covering and its attachment to support.

**General Limitations and Conditions of Use:**

- Scope of "Limitations and Conditions of Use" for this evaluation:  
This evaluation report for "Optional Statewide Approval" contains technical documentation, specifications and installation method(s) which include "Limitations and Conditions of Use" throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under "Optional Statewide Approval".
- Option for application outside "Limitations and Conditions of Use"  
Rule 61G20-3.005(1)(e) allows engineering analysis for "project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code". Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others.
- Fire Classification is outside the scope of Rule 61G20-3, and is therefore not included in this evaluation.
- This evaluation report does not evaluate the use of this product for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties)

**Referenced Data:**

1. ASTM D 1970-01/ASTM D4798 Test  
By PRI Construction Technologies, LLC (FBC Organization #TST ID: 5878)  
Report #: BWR-511-02-01, Report Date: 3/18/09
2. Equivalency of Test Standard Certification  
By James L. Buckner, P.E. @ CBUCK Engineering
3. Reference Document  
Letter dated, 8/10/12
4. Quality Assurance  
By UL, LLC (FBC Organization ID# QUA 1743)  
File# ML R28970
5. Certification of Independence  
By James L. Buckner, P.E. @ CBUCK Engineering  
(FBC Organization # ANE ID: 1916)

## INSTALLATION METHOD

Englert, Inc.

**“MetalMan HT-60”**

### Self-Adhered Roofing Underlayment

#### Evaluated Installation Method:

Installation shall be in accordance with installation method described herein and in compliance with Section 1507.1.1 and applicable code sections of the current Florida Building Code, subject to the Limitations and Conditions of Use listed in this Evaluation Report, and in accordance with both the underlayment manufacturer’s and roof covering manufacturer’s installation instructions. Use of this product with tile roof installation shall comply with FBC 1507.3.3 and 1507.3.3.1.

- Adhere Englert MetalMan HT-60 directly to the entire roof deck.

OR

- Adhere a minimum 4-inch-wide (102 mm) strip of Englert MetalMan HT-60 over all joints in the roof decking. Apply an approved underlayment in accordance with FBC Table 1507.1.1 for the applicable roof covering over the entire roof over the 4-inch-wide (102 mm) Englert MetalMan HT-60 strips.

#### General Installation Instructions:

- Prime surface as recommended by manufacturer.
- Align the membrane lengthwise, parallel to the eave by completely unrolling and pressing exposed membrane area into place.
- Once aligned, peel back the release film and press the membrane firmly in place.
- Side laps must be a minimum of 3” and End laps a minimum of 6”.
- Apply subsequent courses of membrane parallel to the eave, from the lower edge of the roof upwards in a shingle-lap manner.
- Product to be applied directly to a clean dry surface.
- Dust, dirt, oil, grease, moisture, debris and other loose materials or contaminants must be removed prior to application.
- Check that all nails in deck are not protruding and re-fasten any loose decking panels.
- Product shall not be permanently exposed to sunlight.
- Do not store underlayment in areas where moisture is a problem.
- Protect membrane from damage during construction.
- Apply membrane only in fair weather when the air, surface and membrane are at temperatures of 40 degrees Fahrenheit and higher.
- “MetalMan HT-60” shall not be left exposed for more than 90 days after installation.
- “MetalMan HT-60” may be used with asphalt shingles, metal roofing, slate or wood shakes & shingles.

Product shall be installed in accordance with the installation method described herein and in compliance with applicable code sections of the Florida Building Code 7th Edition (2020), subject to the Limitations and Conditions of Use listed in this Evaluation Report.

Refer to manufacturer’s installation instructions as a supplemental guide for attachment.