Product Evaluation Report
SENTRIGARD METAL ROOFING SYSTEMS ASSOCIATION, INC.,
an NB HANDY COMPANY

Senrigard ML 100AH 0.032” Alum. 16” Wide Roof Panel over Plywood

Florida Product Approval # 9860.3 R4
Florida Building Code 2014
Per Rule 61G20-3
Method: 1 –D

Category: Roofing
Subcategory: Metal Roofing
Compliance Method: 61G20-3.005(1)(d)
HVHZ

Product Manufacturer:
Senrigard Metal Roofing Systems Association, Inc.,
an NB Handy Company
65 10th Street
Lynchburg, Virginia 24502

Engineer Evaluator:
Terrence E. Wolfe, P.E. # 44923
Florida Evaluation ANE ID: 1920

Validator:
Locke Bowden, P.E., FL #49704
9450 Alysbury Place
Montgomery, AL 36117

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September 11, 2015
Compliance Statement: The product as described in this report has demonstrated compliance with the Florida Building Code 2014, Sections 1504.3.2, 1518.9, 1523.6.5.2.4.

Product Description: Sentrigard ML 100AH, 1” Mechanical Lock Standing Seam Roof Panel, 0.032” Aluminum, 16” Wide, Roof Panel restrained with stainless steel slider clips into APA Plywood decking. Non-structural Application.

Panel Material/Standards: Material: 0.032” Aluminum, 3105 H-24 unpainted or painted with Valspar Fluropon conforming to Florida Building Code 2014 Section 1507.4.3. Corrosion Resistance: Panel Material shall comply with Florida Building Code 2014, Section 1507.4.3

Panel Dimension(s): Thickness: 0.032”
Width: 16” max coverage
Rib Height: 1”
Panel Seam: 180° Seam, Double Lock w/ mechanical seamer

Roof Panel Clip: Product Name: UC-3 Stainless Steel Butterfly Clip Assembly
Type: Two Piece Slider
Corrosion Resistance: Per Florida Building Code 2014 Section 1506.7

Roof Clip Fastener: (2) #12-11 x 1” Pancake Type A
¼” minimum penetration through plywood
Corrosion Resistance: Per Florida Building Code 2014, Section 1506.6, 1517.6

Substrate Description: 1) For HVHZ construction, use 19/32” or greater APA Rated plywood or wood plank. In reroofing applications where the deck is less than 19/32” thick (min. 15/32”) the attachment of the decking in no case shall be less than 8D annual ring shank nails at 6” O.C. Design of plywood and plywood supports are outside the scope of this evaluation. Substrate must be designed in accordance w/ Florida Building Code 2014.

2) For Non-HVHZ applications, use min. 15/32” thick, APA Rated plywood over supports at maximum 24” O.C. Design of plywood and plywood supports are outside the scope of this evaluation. Substrate must be designed in accordance w/ Florida Building Code 2014.

Design Uplift Pressures:

September 11, 2015
Table "A"

<table>
<thead>
<tr>
<th>Maximum Total Uplift Design Pressure</th>
<th>63.5 psf</th>
<th>101.0 psf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clip Spacing:</td>
<td>24&quot; O.C.</td>
<td>6&quot; O.C.</td>
</tr>
<tr>
<td># Fasteners per Clip:</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

*Design Pressure includes a Safety Factor = 2.0.

Code Compliance: The product described herein has demonstrated compliance with The Florida Building Code 2014, Section 1504.3.2, 1518.9, 1523.6.5.2.4.

Evaluation Report Scope: The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2014, as relates to Rule 61G20-3.

Performance Standards: The product described herein has demonstrated compliance with:
  - TAS 125-03
  - UL 580-06 - Test for Uplift Resistance of Roof Assemblies
  - UL 1897-04 - Uplift Test for Roof Covering Systems
  - TAS 100-95 - Test Procedure for Wind and Wind Driven Rain Resistance of Discontinuous Roof Systems
  - TAS 110-00 - Accel. Weathering ASTM G 155 / Salt Spray ASTM B 117

Reference Data:
1. TAS 125-03: UL 580-94 / 1897-98 Uplift Test
   Force Engineering & Testing, Inc. (FBC Organization # TST-5328)
2. TAS 100-95
   Farabaugh Engineering & Testing, Inc. (FBC Organization # TST-1654)
3. TAS 110-00: Valspar Fluoropon coated metal panel testing
   A) ASTM G 155 by PRI Asphalt Technologies dated 10/31/2012
   B) ASTM B 117 by PRI Asphalt Technologies dated 10/31/2012
4. Certificate of Independence
   By Terrence E. Wolfe, P.E. (No. 44923) @ Force Engineering & Testing, Inc.
   (FBC Organization # ANE ID: 1920)

Test Standard Equivalency:
1. The UL 580-94 test standard is equivalent to the UL 580-06 test standard.
2. The UL 1897-98 test standard is equivalent to the UL 1897-04 test standard.
Quality Assurance Entity: The Report Holder has demonstrated compliance with Florida Building Code and Rule 61G20-3.005 (3) for manufacturing locations audited by an approved quality assurance entity (Keystone Certifications, Inc – FBC OrgID QUA 1824). A listing of manufacturers authorized by the Report Holder to employ the Florida Product Approvals qualified by this report can be found at http://www.keystonecerts.com/qa-assoc/sentrigard or by scanning the following QR Code:

Minimum Slope Range: 2:12. Minimum Slope shall comply with Florida Building Code 2014, including Sections 1515.2.2 and in accordance with Manufacturers recommendations.

Installation: Install per manufacturer’s recommended details and RAS 133.

Underlayment: Per Manufacturer’s installation guidelines per Florida Building Code 2014 Section 1518.2, 1518.3, 1518.4.

Fire Barrier: Any approved fire barrier having a current NOA. Refer to a current fire directory listing for fire ratings of this roofing system assembly as well as the location of the fire barrier within the assembly. Fire classification is not part of this acceptance.

Shear Diaphragm: Shear diaphragm values are outside the scope of this report.

Design Procedure: Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2014 for roof cladding wind loads. These component wind loads for roof cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to his structure and analyze the panel fasteners for pullout and pullover. Support framing must be in compliance with Florida Building Code 2014 Chapter 22 for steel, Chapter 23 for wood and Chapter 16 for structural loading.

*The Test Reports are owned by Metalforming, Inc. Metalforming, Inc. gives the above manufacturer permission to use these test reports.

FL# 9860.3 R4

September 11, 2015
UC3 STAINLESS STEEL EXPANSION CLIP
.015" THICK

3" DIA.

STATE OF FLORIDA
C.O.A.
# 26778

FEB 16 2015

TERRENCE E. WOLFE
LICENSE No.44923
STATE Of FLORIDA
PROFESSIONAL ENGINEER
1"x1"x1" Z CLOSURE

RAKE TRIM

12-11 x 1" PANCAKE HEAD TYPE A @ 6" O.C.

18" WIDE ICE & WATER SHIELD AT EAVE & RAKE
30# FELT OVER ENTIRE ROOF

3/32"x1" CONT. TAPE SEALER

15/32" PLYWOOD

12-11 x 1" PANCAKE HEAD TYPE A (2) PER CLIP

UC3 SLIDER CLIP

1" MECH LOCK ALUM. PANEL

FEB. 16. 2015

State of Florida
C.O.A.

TERRENCE E. WOLF
No. 44923
STATE OF FLORIDA
PROFESSIONAL ENGINEER

sentrigard
metal roof ing systems

SENTRIGARD ML 100AH
12-11 x 1" PANCAKE HEAD TYPE A
@ 12" O.C.
(DO NOT OVERTIGHTEN)

19" WIDE ICE & WATER SHIELD
AT EAVE & RAKE
30# FELT OVER ENTIRE ROOF

1/2" PLYWOOD

12-11 x 1" PANCAKE HEAD TYPE A
(2) PER CLIP
FIELD NOTCH PANEL LEGS AND BEND PAN TO FORM OPEN HEM

OFFSET CLEAT

FILL END OF RIB WITH URETHANE SEALANT (TYP.)

TAPE SEALER

FIELD NOTCH PANEL LEGS AND BEND PAN TO FORM OPEN HEM

OFFSET CLEAT

1/2" OVERHANG

12-11 x 1" PANCAKE HEAD 2 PER CLIP

18" WIDE ICE & WATER SHIELD AT EAVE & RAKE 30# FELT OVER ENTIRE ROOF

TAPE SEALER

18" WIDE ICE & WATER SHIELD AT EAVE & RAKE 30# FELT OVER ENTIRE ROOF

12-11 x 1 PANCAKE HEAD
@ 12" O.C.

CLEAT

12-11 x 1 PANCAKE HEAD
@ 12" O.C.

SENTRIGARD ML 100AH

SENTRIGARD METAL ROOFING SYSTEMS
1" MECH LOCK ALUM. PANEL

15/32" PLYWOOD [MIN.]

18" WIDE ICE & WATER SHIELD
AT EAVE & RAKE
30# FELT OVER ENTIRE ROOF

TUBE SEALANT IN SEAM

DBL-BEAD TAPE SEALER

HIGH EAVE TRIM

#14-10 x 1"
(4 PER PANEL)

SENTRIGARD ML 100AH