



## EAGLE ROOFING PRODUCTS

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## CONCRETE ROOF TILES

CSI Section: 07 32 16 Concrete Roof Tiles

### 1.0 RECOGNITION

The Eagle Roofing Product's Eagle and Eaglelite Interlocking Concrete Roofing Tiles recognized in this report have been evaluated for weather resistance, wind uplift resistance, and fire retardant classification and found to be in compliance with IBC Chapter 15 and IRC Chapter 9 for use as a component in a Class A, B or C roof covering. The following code editions are recognized:

- 2018, 2015, 2012 International Building Code® (IBC)
- 2018, 2015, 2012 International Residential Code® (IRC)
- 2019, 2016, 2013 California Building Code (CBC) and 2019, 2016, 2013 California Residential Code (CRC)—See attached Supplement
- 2017, 2014 Florida Building Code, Building (FBC-Building) and 2017, 2014 Florida Building Code, Residential (FBC, Residential)—See attached Supplement

### 2.0 LIMITATIONS

Use of the Eagle Roofing Products Concrete Roof Tiles recognized in this report is subject to the following limitations:

**2.1** The roof tiles shall be manufactured, identified and installed in accordance with this report, the applicable code and the Roof Tile Installation Manual. In the event of a conflict this report governs.

**2.2** Eagle Roofing Product's "concrete roof tile shall be installed on roof slopes of 2½ units vertical in 12 units horizontal (21-percent slope) or greater." (2018 and 2015 IBC Section 1507.3.2).

**2.3** Roof Tiles shall be installed in accordance with this report except, where the jurisdiction requires conformance to the 2018 IBC or 2018 IRC, the following shall apply:

**2.3.1** Underlayment shall conform with IBC Section 1507.1.1 or IRC Section 905.1.1.

**2.3.2** Attachment of the concrete roof tiles shall be designed to resist wind loads according to IBC Sections 1504.2 and 1609.5 or IRC Section 905.3, as applicable.

**2.4** The supporting structure shall be designed to support the loads. Design is beyond the scope of this report.

**2.5** The roof tiles are produced in Sumterville, FL; Rialto, CA; Stockton, CA; and Phoenix, AZ.

### 3.0 PRODUCT USE

**3.1 General:** Eagle Roofing Product's Concrete Roof Tiles shall be used as a roof covering in accordance with Section 1503 of the IBC. Eagle Roofing Product's Concrete Roof Tiles recognized in this report are identified in Tables 2A through 2C of this report. These tiles:

- Satisfy the requirements of ASTM C1492-03;
- Provide a Class A Fire Retardant Classification when tested on combustible decks in accordance with ASTM E108.

**3.2 Anchoring:** Eagle Roofing Product's Concrete Roof Tiles shall be anchored by mortar or adhesively attached in accordance with each respective adhesive manufacturer's approved research report.

**3.3** Wind uplift resistance is addressed in Section 4.0 of this report.

### 4.0 PRODUCT DESCRIPTION

**4.1 General:** Eagle Roofing Product's Concrete Roof Tiles installation under the 2015 or 2012 IBC or IRC shall be in accordance with the applicable code, the Concrete and Clay Roof Tile Installation Manual for Moderate Climate Regions, dated August 2015, published by the Tile Roofing Institute and the Western States Roofing Contractors Association, and this report. In the event of a conflict, provisions of this report govern. The TRI manual is available for download attached to [ER-2015](#) from the UES website at [www.uniform-es.org](http://www.uniform-es.org). The Eagle roof tiles and Eaglelite roof tiles are similar in production except that the Eaglelite tiles are produced with lightweight aggregates in lieu of sand. Figure 1 of this report includes typical profiles of the Eagle roof tiles.

**4.2 Attachment:** Tiles shall be attached to the roof structure based on the applicable code as noted in Table 1 of this report:

*The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.*

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Table 1		
Attachment Design		
Applicable Code <sup>1</sup>	Criteria for Applicability	Design Information Location <sup>2</sup>
2015 or 2012 IBC	Ultimate Design Wind Speeds ( $V_{ult}$ ) $\leq$ 130 MPH and Mean Roof Height $\leq$ 60 feet	Roof Tile Installation Manual & Table 1507.3.7 of the applicable IBC
2015 or 2012 IRC	Mean Roof Height $\leq$ 40 feet	Roof Tile Installation Manual & Section R905.3.7

For SI: 1 foot = 305 mm, 1 mph = 1.6 m/s

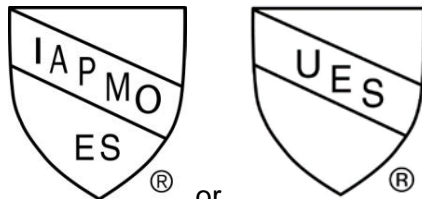
<sup>1</sup> Refer to Section 2.4 for the 2018 IBC and IRC.

<sup>2</sup>Roof Tile Installation Manual is applicable for use with the 2015 and 2012 IBC and IRC.

**4.3 Fire Classification:** Eagle Roofing Product’s Concrete Roof Tiles, installed in accordance with this evaluation report, are Class A roof coverings in accordance with Section 1505.2 of the IBC and Section R902.1 of the IRC, as applicable. Roof classifications for adhesively attached systems shall be in accordance with the adhesive manufacturer’s approved research report.

### 5.0 IDENTIFICATION

Shipping pallets are identified with the report holder’s name (Eagle Roofing Products), manufacturing location address, product name, installed weight, shift and date of production, the UES Mark of conformity and evaluation report number (ER-1900). The tiles produced in the Sumterville, Florida manufacturing facility are additionally identified with “Florida” imprinted on each tile. Either UES Mark of Conformity may be used as shown below:



IAPMO UES ER-1900

### 6.0 SUBSTANTIATING DATA

Data in accordance with ICC-ES AC180, dated February 2012 (editorially revised March 2018), manufacturer’s descriptive literature and installation instructions. Test results are from laboratories in compliance with ISO/IEC 17025. Eagle Roofing Product’s Concrete Roof Tiles are manufactured in the facilities specified in Tables 2A through 2C of this report.

### 7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research carried out by IAPMO Uniform Evaluation Service on Eagle Roofing Product’s Concrete Roof Tiles to assess its conformance to the codes and standards shown in Section 1.0 of this report and documents the product’s certification. Products are manufactured at the locations noted in Section 2.5 of this report under a quality control program with periodic inspections under the supervision of IAPMO UES.

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For additional information about this evaluation report please visit [www.uniform-es.org](http://www.uniform-es.org) or email us at [info@uniform-es.org](mailto:info@uniform-es.org)



### Table 2A - Tiles Manufactured at Rialto or Stockton, California

Tile	Installed Dry Weight <sup>1</sup> (psf)	Dimensions <sup>2</sup> (inch)	Tile Factor		Tile Type
		Length X Width	TF (ft <sup>3</sup> )	Ratio <sup>1</sup>	
Capistrano	9.0	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4625	1.039	Type I – High Profile
Malibu	9.0	17 X 12 <sup>3</sup> / <sub>8</sub>	1.486	1.056	Type II – Medium Profile
Bel Air	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Ponderosa	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Golden Eagle	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Double Eagle Ponderosa	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Tapered Slate	9.7	17 x 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Estate	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Double Eagle Bel Air	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Eaglelite Capistrano	5.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4625	1.039	Type I – High Profile
Eaglelite Malibu	5.5	17 X 12 <sup>3</sup> / <sub>8</sub>	1.486	1.056	Type II – Medium Profile
Eaglelite Ponderosa	7.2	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Eaglelite Bel Air	7.2	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Eaglelite Double Eagle Ponderosa	7.2	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Eaglelite Estate	7.2	17 x 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Eaglelite Golden Eagle	7.2	17 x 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
<b>STOCKTON ONLY</b>					
Sequoia Shake	9.7	17 x 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Textured Slate	9.7	17 x 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile

For SI: 1 inch = 25.4 mm, 1 psf = 4.88 kg/m<sup>2</sup>

### Table 2B - Tiles Manufactured at Phoenix, Arizona

Tile	Installed Dry Weight <sup>1</sup> (psf)	Dimensions <sup>2</sup> (inch)	Tile Factor		Tile Type
		Length X Width	TF (ft <sup>3</sup> )	Ratio <sup>1</sup>	
Capistrano	9.0	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4625	1.039	Type I – High Profile
Malibu	9.0	17 X 12 <sup>3</sup> / <sub>8</sub>	1.486	1.056	Type II – Medium Profile
Bel Air	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Estate	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Double Eagle Bel Air	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Ponderosa	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Double Eagle Ponderosa	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Sequoia Shake	9.7	17 x 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Tapered Slate	9.7	17 x 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Textured Slate	9.7	17 x 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Golden Eagle	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile

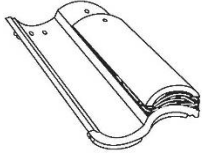
For SI: 1 inch = 25.4 mm, 1 psf = 4.88 kg/m<sup>2</sup>

### Table 2C - Tiles Manufactured at Sumterville, Florida

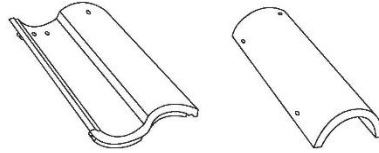
Tile	Installed Dry Weight <sup>1</sup> (psf)	Dimensions <sup>2</sup> (inch)	Tile Factor		Tile Type
		Length X Width	TF (ft <sup>3</sup> )	Ratio <sup>1</sup>	
Capistrano	8.8	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4625	1.039	Type I – High Profile
Malibu	7.95	17 X 12 <sup>3</sup> / <sub>8</sub>	1.486	1.056	Type II – Medium Profile
Bel Air	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Estate	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Double Eagle Bel Air	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Ponderosa	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Double Eagle Ponderosa	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Sequoia Shake	9.7	17 x 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Tapered Slate	9.7	17 x 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Textured Slate	9.7	17 x 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile
Golden Eagle	9.7	17 X 12 <sup>3</sup> / <sub>8</sub>	1.4683	1.044	Type III – Low Profile

For SI: 1 inch = 25.4 mm, 1 psf = 4.88 kg/m<sup>2</sup>

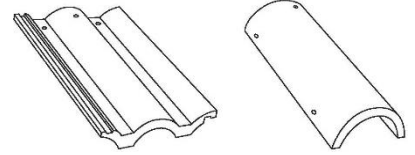
Notes: 1. Used on a 3-inch headlap  
2. Nominal Dimension



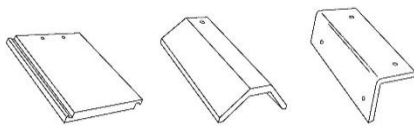
**Boosted Capistrano**



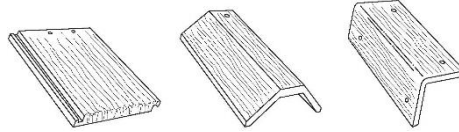
**Capistrano**



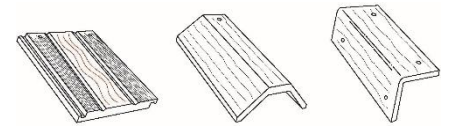
**Malibu**



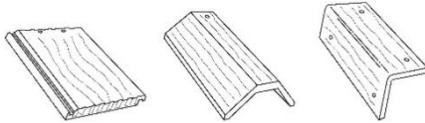
**Bel Air**



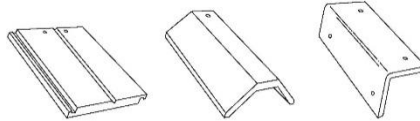
**Ponderosa**



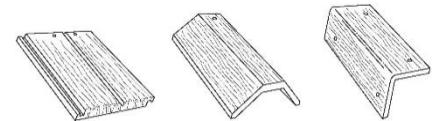
**Golden Eagle**



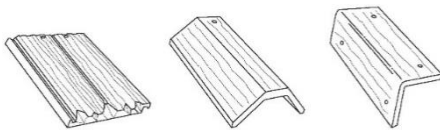
**Estate**



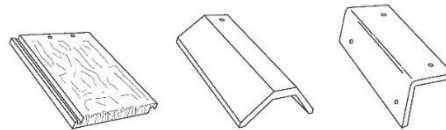
**Double Eagle Bel Air**



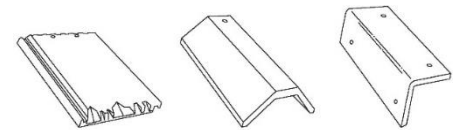
**Double Eagle Ponderosa**



**Sequoia Shake**



**Textured Slate**



**Tapered Slate**

**FIGURE 1  
CONCRETE TILE AND TRIM PROFILES**



## CALIFORNIA SUPPLEMENT

### EAGLE ROOFING PRODUCTS – CONCRETE ROOF TILES

**Eagle Roofing Products**  
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For additional information about this evaluation report please visit  
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#### CSI Section: 07 32 16 Concrete Roof Tiles

#### 1.0 RECOGNITION

The Eagle and Eaglelite Interlocking Concrete Roof Tiles evaluated in IAPMO UES ER-1900 are satisfactory alternatives to the following codes and regulations:

- 2019, 2016, 2013 California Building Code (CBC)
- 2019, 2016, 2013 California Residential Code (CRC)

#### 2.0 PRODUCT USE

**2.1** The Eagle and Eaglelite Interlocking Concrete Roof Tiles may be used as a Class A, B, or C roof covering system complying with Sections 1505.1.1 of the CBC or R902.1.1 of the CRC; Sections 1505.1.2 of the CBC or R902.1.2 of the CRC; or Sections 1505.1.3 of the CBC or R902.1.3 of the CRC, respectively.

**2.2** The design and installation of the Eagle and Eaglelite Interlocking Concrete Roof Tiles shall be in accordance with Sections 1507.3.10 and 1513 of the CBC or Section 905.3 of the CRC, as applicable, and ER-1900 with respect to the 2015 IBC or 2015 IRC.

**2.3** Roof Tiles shall be installed in accordance with Section 3.0 of ER-1900 except, where the jurisdiction requires conformance to the 2018 IBC or IRC, the following shall be substituted:

**2.3.1** Underlayment shall conform with IBC Section 1507.1.1 or IRC Section 905.1.1.

**2.3.2** Attachment shall be designed to resist wind loads according to IBC Section 1507.3.7 and Section 1609.5 or IRC section 905.3.

**2.4** Eagle and Eaglelite Interlocking Concrete Roof Tiles may be used in “new buildings located in any Fire Hazard Severity Zone or any Wildland-Urban Interface Fire Area designated by the enforcing agency constructed after the application date shall comply with the provisions” in accordance with Sections 701A.3 and 705A of the CBC or Sections R902.1.4, R337.1.3.1 and R337.5 of the CRC, as applicable, and with the 2015 IBC as presented in ER-1900.



## FLORIDA SUPPLEMENT

### EAGLE ROOFING PRODUCTS— CONCRETE ROOF TILES

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CSI Section: 07 32 16 Concrete Roof Tiles

#### 1.0 RECOGNITION

The Eagle and Eaglelite Interlocking Concrete Roof Tiles evaluated in IAPMO UES ER-1900 are satisfactory alternatives to the following codes and regulations:

- 2017 and 2014 Florida Building Code, Building (FBC, Building)
- 2017 and 2014 Florida Building Code, Residential (FBC, Residential)

#### 2.0 LIMITATIONS

**2.1** Verification shall be provided that a quality assurance agency audits the manufacturers quality assurance program and audits the production quality of products, in accordance with Section (5)(d) of Florida Rule 61G20-3.008. The quality assurance agency shall be approved by the Commission (or the building official when the report holder does not possess an approval by the Commission).

**2.2** Evaluation to the high-velocity hurricane zone provisions in Sections 1518, 1620 and 1626 of the FBC, Building and Chapter 44 of the FBC, Residential is beyond the scope of this report.

**2.3** The installation of tile on a minimum 2 units vertical in 12 units horizontal is allowed by FRSA/TRI Florida High Wind Concrete and Clay installation manual for installations with a sealed roof underlayment system with a code approved adhesive.

#### 3.0 PRODUCT USE

The design and installation of the Eagle and Eaglelite Interlocking Concrete Roofing Tiles shall be in accordance with the 2015 International Building Code and the 2015 International Residential Code as noted in ER-1900. From FBC-Building Section 1507.3 and FBC-Residential Section R905.3 we see that the installation of the Eagle Roofing concrete roof tiles “shall be in accordance with the requirements of the FRSA/TRI *Florida High Wind Concrete and Clay Roof Tile Installation Manual*, Fifth Edition where the  $V_{asd}$  is determined in accordance with” FBC, Building Section 1609.3.1, FBC, Residential Section R301.2.1.3, or

the recommendations of RAS 118, 119 or 120.

Load combinations shall be in accordance with Sections 1605.2 or 1605.3 of the FBC, Building, as applicable.

Design wind loads shall be in accordance with Section 1609.5 of the FBC, Building or Section R301.2.1 of the FBC, Residential, as applicable.

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