

**Product Approval**

USER: Public User

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SECRETARY
**Search Criteria**[Refine Search](#)

Code Version	2017	FL#	12875
Application Type	ALL	Product Manufacturer	ALL
Category	ALL	Subcategory	ALL
Application Status	ALL	Compliance Method	ALL
Quality Assurance Entity	ALL	Quality Assurance Entity Contract Expired	ALL
Product Model, Number or Name	ALL	Product Description	ALL
Approved for use in HVHZ	ALL	Approved for use outside HVHZ	ALL
Impact Resistant	ALL	Design Pressure	ALL
Other	ALL		

**Search Results - Applications**

<a href="#">FL#</a>	<a href="#">Type</a>	<a href="#">Manufacturer</a>	<a href="#">Validated By</a>	<a href="#">Status</a>
<a href="#">FL12875-R6</a> <a href="#">History</a>	Revision	Nichiha Corporation <b>Category:</b> Panel Walls <b>Subcategory:</b> Siding	William R. Heiden III, P.E. (574) 527-3717	Approved *

\*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.



# Evaluation Service

## CERTIFICATION PROGRAM AUTHORIZATION FOR PRODUCT CERTIFICATION

Nichiha Corporation  
6465 E Johns Crossing, Suite 250  
Johns Creek, GA 30097  
1.866.424.4421  
[www.nichiha.com](http://www.nichiha.com)

ATTN: David Hohenstern

The Product described below is hereby approved for evaluation in the next revision of the **Pei Evaluation Service, LLC** Product Directory. The approval is based on successful completion of testing with reporting to the Administrator of the testing results, accompanied by related drawings, by *Progressive Engineering Inc.* Third party evaluation services conducted by **Pei Evaluation Service, LLC**, A Third Party Accreditation Body.

1. The Product Evaluation below will be added to the next revision of the **Pei Evaluation Service, LLC** Directory.

RECORD OF PRODUCT TESTING					
COMPANY	Product Category	SERIES MODEL & PRODUCT DESCRIPTION	PRODUCT COMPLIANCE		
Nichiha USA, Inc	Panel Walls / Siding	Architectural Wall Panels (EX Series)		Test Standards	
		VintageWood™	CanyonBrick	ASTM C1186	2008
		EmpireBlock™	CinderBlock	ASTM E84	2013(A)
		Illumination Series™	TuffBlock	ASTM E330	2002
		ArchitecturalBlock	RoughSawn	NFPA 268	2012
		Sandstone	Ribbed	NFPA 285	2006 (12)
		VintageBrick	Savannah Smooth	TAS 202 & 203	
		IndustrialBlock	Sierra Premium Shake	FBC 1620.2 & 1626	

2. This Certification will expire **January 31, 2019** and requires validation until then by continued evaluation service in the **Pei Evaluation Service** Directory.

3. Product Tested by: *Progressive Engineering Inc., Commercial Testing Laboratory, Southwest Research and Intertek*

4. Product Reported by: **Pei Evaluation Service, LLC**

5. The product described is designed and manufactured to comply with the requirements of the 2017 Florida Building Code. See [www.p-e-i.com/reports.html](http://www.p-e-i.com/reports.html) for the approved product installation guidelines as tested by *Progressive Engineering Inc.* Product certification compliance only pertains to the assemblies and actual material tested.

Authorized for Certification

Director of **Pei Evaluation Service**



Dated: January 19, 2018

58640 State Road 15 - Goshen, IN 46528  
Phone: 574-533-0337 - [www.p-e-i.com](http://www.p-e-i.com)



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### Compliance - Evidence Submitted

#### 1. Test Reports for :

- a. Standard Test Method for Flat Non-Asbestos Fiber Cement Sheets for Type A Grade II products - ASTM C1186
- b. Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls & Doors by Uniform Static Air Pressure Difference - ASTM E330
- C. Standard Test Method for Surface Burning Characteristics of Building Materials - ASTM E84
- D. Florida Building Code, TAS 201, TAS 202 & TAS 203 - Impact Procedures, Testing Impact and Non-Impact Building Envelope Components Using Uniform Static Air Pressure and Cyclic Wind Pressure Loading.
- E. Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Accordance with NFPA 268, 2012 edition.
- F. Fire Performance Evaluation of a Wall Assembly Tested in Accordance with NFPA 285, 2012 edition.
- G. This certification affirms that the installation instructions referenced with this Certification were as tested in the noted test methods.

#### 2. Quality Assurance: **Progressive Engineering Inc.**

#### 3. Florida Building Code Statements

This Certificate of Compliance is being issued Per Rule Chapter 61G20-3 Section 61G20-3.005 of the Florida Department of Business & Professional Regulation. As the product certification entity, we certify that the product is in compliance with the requirements of the 2017 Florida Building Code.

#### 4. Limits of Evaluation

1. These products shall be installed in accordance with the requirements of **Nichiha's** Installation Instructions.
2. This Product Evaluation Report (**PER**) does not address the capacity of the framing members, framing connections, structural and non-structural sheathing connections, or overall wall load carrying capacity. These items are outside the scope of this **PER** and fall under the responsibility of the registered design professional.
3. All openings must have appropriate flashing to prevent moisture penetration.
4. These products may only be installed on vertical walls and are not intended for use on roofing applications.
5. **Architectural Wall Panels** and **Sierra Premium Shake** must be stored in a covered area and kept dry. It must be stored flat and off the ground prior to installation.
6. Corrosion resistant fasteners such as stainless steel or hot-dipped galvanized screws must be used to fasten siding to the wall framing. *Aluminum fasteners, staples, clipped head or T-head nails, or fasteners not rated or designed for intended use shall NOT be used.*



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#### 4. Limits of Evaluation cont.

- 7. For any gaps that require filling with a sealant, follow manufacturer's installation instructions.
- 8. When installed horizontally the top course of Architectural Wall Panels shall be face fastened using #8 buglehead screws or #7 buglehead trim/finish screws through the applicable shim to maintain the rainscreen gap between the panel and wall. Fasteners must be installed at each wall stud (wood or steel) based on the required spacing noted in the Table #7. A registered design professional shall specify adequate length of the fastener based on the wall/framing substrate and required fastener design load.
- 9. Independent product evaluator is not responsible for any product warranty, either expressed or implied. Independent product evaluator's liability shall not exceed the amount required to produce this report.
- 10. This product certification pertains only to the assemblies and actual materials tested.

#### 5. Code Compliance

Product meets the 2017 Florida Building Code for the standards evaluated.

#### 6. Physical Properties - ASTM C1186

**Architectural Wall Panel Physical Properties per ASTM C1186**

Property	Test Result	Requirement	Pass / Fail
Linear Variation w/ Change in Moisture Content %	1.177%	Report Value	Pass
Moisture Content	7.10%	Report Value	Report Value
Flexural Strength Equilibrium Wet Saturated	1580 psi 1418 psi	≥1450 psi ≥1015 psi	Pass
Water Tightness	No drop formation observed	No drop formation observed	Pass
Freeze/Thaw Resistance			
Strength Retention, %	80.0%	80.0%	Pass
Observation	No cracks or delaminations	No cracks or delaminations	Pass
Warm Water Resistance			
Strength Retention, %	78.6%	Report Value	Report Value
Observation	No deleterious effects	No deleterious effects	Pass
Heat / Rain Resistance	No signs of cracks, damage or structural failure after 25 cycles	No visible cracks or structural alteration	Pass

\* Table provided is based on information from PEI Tests Report 2015-475A - D.



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### 6. Physical Properties - ASTM C1186 continued

#### Sierra Premium Shake & Savannah Smooth Physical Properties per ASTM C1186

Property	Test Result	Requirement	Pass / Fail
Linear Variation w/ Change in Moisture Content %	0.055%	Report Value	Pass
Moisture Content	5.25%	Report Value	Report Value
Flexural Strength Equilibrium Wet Saturated	1668 psi 1497 psi	≥1450 psi ≥1015 psi	Pass
Water Tightness	No drop formation observed	No drop formation observed	Pass
<b>Freeze/Thaw Resistance</b>			
Strength Retention, %	81.0%	80.0%	Pass
Observation	No cracks or delaminations	No cracks or delaminations	Pass
<b>Warm Water Resistance</b>			
Strength Retention, %	70.1%	Report Value	Pass
Observation	No deleterious effects	No deleterious effects	Pass
Heat / Rain Resistance	No signs of cracks, damage or structural failure after 25 cycles	No visible cracks or structural alteration	Pass

\* Table provided is based on information from PEI Tests Report 2016-1872G



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#### 7. Performance Property Testing Values - ASTM E330

Performance Property Testing Values - ASTM E330

Nominal Panel Thickness (in)	Panel Orientation	Tested Framing Material	Required Clip System <sup>2,3</sup>	Maximum Clip/Fastener Spacing (in) <sup>6</sup>	Average Allowable Load (PSF) <sup>1</sup>	Required Fastener Withdrawal Capacity (lbs.) <sup>1,2</sup>
5/8	Horizontal	18-ga Steel Studs	JEL777	16	58.4	146.2
		16-ga Steel Studs		16	89.5	223.8
		18-ga Steel Studs	JEL778	16	58.0	145.1
		16-ga Steel Studs		16	72.6	181.5
		2x6 Douglas Fir Studs		16	63.6	158.9
	Vertical	7/16" APA Rated OSB	JEL777	4 equally spaced clips	41.4	45.4
			JEL778	4 equally spaced clips	57.6	63.0
		18-ga Steel Studs @ 18" o.c.	JEL777	4 equally spaced clips	59.2	64.8
		16-ga Steel studs - 18" o.c., 5/8" Glass Mat Sheathing	JEL778	4 equally spaced clips	92.9	101.6
		2x6 Douglas Fir Studs 3/4" APA Plywood	JEL778	4 equally spaced clips	89.5	97.9
3/4	Horizontal	18-ga Steel Studs	JEL787	16	58.5	146.2
			JEL788	16	58.0	145.1
7/8	Horizontal	18-ga Steel Studs	JEL787	16	58.5	146.2
			JEL788	16	58.0	145.1

1. The required fastener withdrawal capacity is based upon 18-inch deep panels and the corresponding clip/fastener spacing. The calculated value indicates the fastener withdrawal capacity required to ensure the full siding capacity is utilized. Any fastener to frame/sheathing combination that meets the required fastener withdrawal capacity, has a minimum head diameter of 0.375-in, and has a minimum shank diameter of 0.134-in may be used to anchor the clip system to the wall.

2. The required fastener withdrawal capacity may be reduced by the ratio of the Actual Design Pressure to the Allowable Design Pressure:

$$\frac{\text{Reduced Required Withdrawal Capacity}}{\text{Required Withdrawal Capacity (from Table 2)}} = \frac{\text{Actual Design Pressure}}{\text{Allowable Design Pressure}}$$

3. Refer to Figure 1 through Figure 1 for Nichiha Clip System Details.

4. Vertical panel installation is valid for 119-5/16" (3030-mm) VintageWood™, RoughSawn™, EmpireBlock™, IndustrialBlock™ & Ribbed™ & Illumination products only.

5. Refer to Nichiha Installation Guidelines for proper installation procedure.

6. Values for horizontal clip spacing are based on a minimum of 2 fasteners per clip. Values for Vertical clip spacing are based on a minimum of 4 fasteners per clip.

\* Table provided is based on information from PEI Test Reports 2013-1418A, 2013-1418B, 2014-1543D, 2017-6082A-D.



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### Compliance - Evidence Submitted

## 8. Clip System Requirements

Table 4: Clip System Summary<sup>1,2</sup>

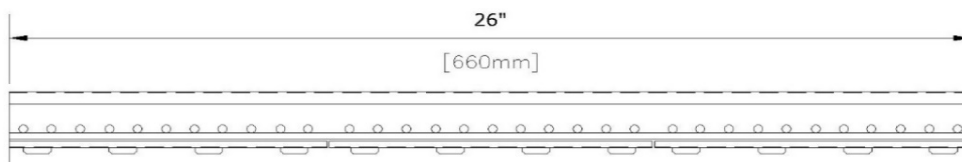
Nominal Panel Thickness (in)	Panel Orientation	Clip System <sup>4</sup>	Rainscreen Gap (mm)	Starter Track <sup>3</sup>	Panel Clip		
					Part No.	Material <sup>3</sup>	Min. Thickness
5/8	Horizontal	JEL777 Steel Clip	10	FA 700	JEL 777	AISI/SAE 1015	.033"
		JEL778 Steel Clip	10	FA700US	JEL778	AISI/SAE 1015	.047"
	Vertical	JEL777 Steel Clip	10	FA710T	JEL777	AISI/SAE 1015	.033"
		JEL778 Steel Clip	10	FA710T	JEL778	AISI/SAE 1015	.047"
3/4	Horizontal	JEL787 Steel Clip	10	FA 700	JEL 787	AISI/SAE 1015	.047"
		JEL788 Steel Clip	10	FA700	JEL788	AISI/SAE 1015	.047"
7/8	Horizontal	JEL787 Steel Clip	10	FA700	JEL787	AISI/SAE 1015	.047"
		JEL788 Steel Clip	10	FA 700	JEL 788	AISI/SAE 1015	.047"

Notes:

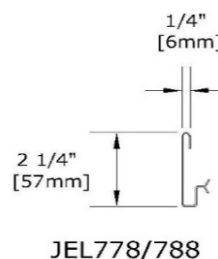
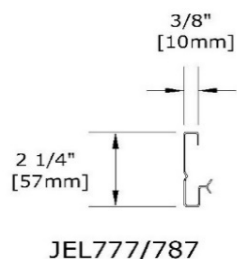
- Clip systems shall be used with the corresponding panel thickness and orientation as shown in Table 7.
- Fasteners must have a minimum head diameter of 0.375-in, minimum shank diameter of 0.134-in. For Withdrawal values please reference <http://www.p-e-i.com/documents/ArchitecturalWallPanels.pdf>.
- All starter tracks and panel clips are manufactured using AISI/SAE 1015 (or better) steel with a minimum yield strength of 27,500 psi and minimum tensile strength of 50,000 psi.
- The starter track steel has a galvalume coating.
- The panel clip steel has a ZAM coating consisting of zinc, aluminum and magnesium
- Table provided is based on information from PEI Test Report 2013-1418B, 2013-1418B, 2014-1543D, 2017-6072A-D.

## 9. Track and Clip Details

Figure 1. Panel Clip Detail



JEL777/787 & JEL778/788 STEEL PANEL CLIP







# Evaluation Service

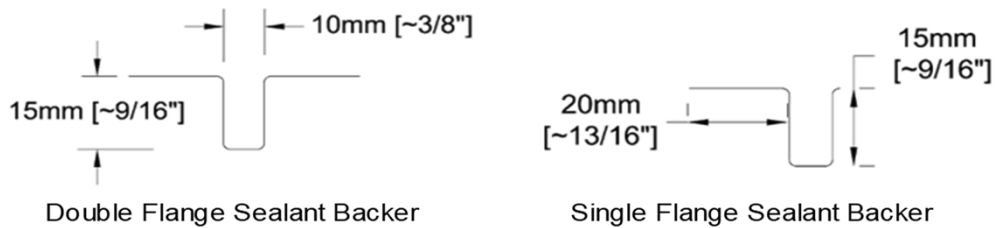
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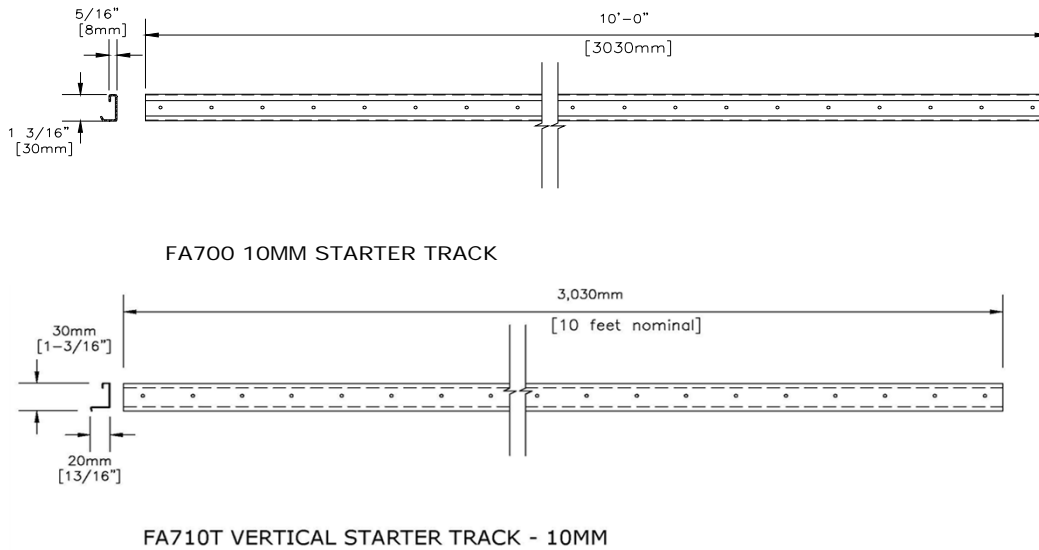
Compliance - Evidence Submitted

## 9. Track and Clip Details continued.

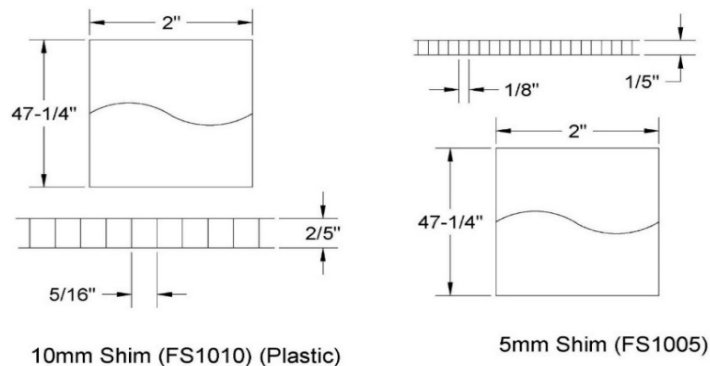
**Figure 2. Sealant Backer Details**



**Figure No. 3 Starter Track Details**



**Figure No. 4 Corrugated Shim Details**







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### 10. NFPA 268 - Ignitibility of Exterior Wall Assemblies

The Fieldstone Assembly was exposed to a minimum radiant heat flux of 12.5 kW/m<sup>2</sup> ± 5% in the presence of a pilot ignition source for a 20-minute period and did not exhibit sustained flaming therefore meeting the acceptance criteria described in NFPA 268.

### 11. NFPA 285 - Fire Propagation

The wall assembly met the acceptance criteria given in the NFPA 285 standard.

- No vertical flame propagation to 10' above the top of the window.
- No lateral flame propagation to 5' feet above the centerline of the window.
- Surface temperature readings did not exceed 1000° F at any time.
- Temperatures in the air cavity did not exceed 1000° F at any time.
- Flame propagation did not occur in the second floor test room at any time, nor did temperatures exceed 500° F at any time.

### 12. TAS 202 / 203 - Impact & Non-Impact & Cyclic Testing

Panel Information					Framing				Fasteners			Design Pressure - Pos / Neg (PSF)
Product ID	Panel Orientation	Thickness	Width	Length	Stud Spacing	Stud Type	Starter Track	Wall Substrate	Clip	Fastener	Spacing along studs	
AWP EX Series	Horizontal	5/8"	18"	72"	16" o.c.	Wood	FA700	5/8" Plywood	JEL778 / JEL788	#10 X 1-1/4" PH Screw	16" o.c.	95 psf
		5/8"	18"	120"	16" o.c.	Wood	FA700	5/8" Plywood	JEL778 / JEL788	#10 X 1-1/4" PH Screw	16" o.c.	95 psf
AWP EX Series	Vertical	5/8"	18"	120"	16" o.c.	Wood	FA710T	5/8" Plywood	JEL778 / JEL788	#10 X 1-1/4" PH Screw	16" o.c.	85 psf

\*Table provided is based on information from Intertek Report H7494.01-550-18- R0 / H7494.02-550-18 R0.

Test Standard	Test Description	Summary
TAS-202-94	Criteria for Testing Impact and Non-Impact Resistant Building Enveloped Components Using Uniform Static Air Pressure	Passed
TAS 203-94	Criteria for testing products subject to Cyclic Wind Pressure	Passed



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### Compliance - Evidence Submitted

### 13. Sierra Premium Shake Allowable Transverse Wind Pressures

Table 7: Allowable Transverse Wind Pressures for Sierra Premium™ Shake<sup>1,2,3</sup>

Configuration Details	Material and Spacing <sup>4</sup>	Blind or Face Fastened	Fastener Type/Size		Maximum Fastener Spacing (in)	Allowable Design Pressure (psf) <sup>5</sup>
			Ends	Field		
9" Sierra Premium™ Shake Screws at corners and 6d siding nails 16" o.c.	Douglas Fir 16" o.c.	Blind	#8-18 x 1-5/8" wafer head w/ Nibs #2, fine thread, Climacoat™, S-12® Point, Rock-On™ Cement Board Screws	6d x 2" Ring Shank Coil Nails	16	24.0
9" Sierra Premium™ Shake Screws at 16" o.c.	Douglas Fir 16" o.c.	Blind	#8-18 x 1-5/8" wafer head w/ Nibs #2, fine thread, Climacoat™, S-12® Point, Rock-On™ Cement Board Screws		16	49.4
9" Sierra Premium™ Shake Screws at corners and roofing nails 8" o.c.	Douglas Fir 16" o.c.	Blind	#8-18 x 1-5/8" wafer head w/ Nibs #2, fine thread, Climacoat™, S-12® Point, Rock-On™ Cement Board Screws	1-3/4" Roofing Coil Nails	8	41.8
9" Sierra Premium™ Shake Screws at 8" o.c.	Douglas Fir 16" o.c.	Blind	#8-18 x 1-5/8" wafer head w/ Nibs #2, fine thread, Climacoat™, S-12® Point, Rock-On™ Cement Board Screws		8	82.6
9" Sierra Premium™ Shake Screws at 16" o.c.	Douglas Fir 16" o.c.	Face	#7 x 2-1/4" PrimeGuard Trim Head Stainless Steel Trim/Finish Screw w/ Type 17 Point		16	179.1

Notes:

1. **Nichiha** Sierra Premium™ Shake fiber cement siding may only be installed on vertical walls. Fasteners must be installed in a way that does not damage the board during installation. Where necessary, pre-drilled holes may be used in combination with hand-nailed fasteners to avoid damage to the fiber cement product.
2. The values in this table are based on testing per ASTM E330 and represent the allowable capacity of the siding to resist the wind pressures associated with the corresponding wind speed.
3. **Nichiha** Sierra Premium™ Shake siding must be installed over an APA Rated 7/16" OSB or Plywood.
4. Framing, bracing, and the attachment of the OSB or Plywood are beyond the scope of this evaluation report.
5. Allowable design pressure values have been adjusted based on a 2.0 Safety Factor.
6. Reference **Nichiha** Installation Guidelines for proper installation procedure.
7. Fasten board ends with the #8 screw, one inch from vertical edges.



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Compliance - Evidence Submitted

### 14. Sierra Premium Shake TAS 202 / TAS 203 Testing

Panel Information					Framing			Fasteners		Design Pressure - Pos / Neg (PSF)
Product ID	Panel Orientation	Thickness	Width	Length	Stud Spacing	Stud Type	Wall Substrate	Fastener	Spacing along studs	
Sierra Premium	Horizontal	1/2"	9"	48"	16" o.c.	Wood	5/8" Plywood	7 X 2-1/4"	16" o.c. (Blind)	55 psf
		1/2"	9"	48"	16" o.c.	Wood	5/8" Plywood	7 X 2-1/4"	16" o.c. (Face)	110 psf

\* Table provided is based on information from PEI Tests Report 2016-1872(H)

Test Standard	Test Description	Summary
TAS-202-94	Criteria for Testing Impact and Non-Impact Resistant Building Enveloped Components Using Uniform Static Air Pressure	Passed
TAS 203-94	Criteria for testing products subject to Cyclic Wind Pressure	Passed

### 12. Identification

- Nichiha brand name and type
- Nichiha's name and address
- Date code stamp
- PER Number & Pei ES Name or Logo

