



Product Evaluation

EC58 | 0217

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: EC-58 **Effective Date:** February 1, 2017
Re-evaluation Date: February 2021

Product Name: Nichiha EX Series Architectural Wall Panels (AWP), Sierra Premium Series Cedar Shakes, and Savannah Smooth boards, Fiber-Reinforced Cement Exterior Siding

Manufacturer: Nichiha Corporation
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Nichiha USA, Inc. (NichiProducts™)
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General Description:

Nichiha EX Series Panels are nominal 5/8", 3/4", or 7/8" thick. The panels are 17-7/8" wide.

Sierra Premium Boards are a nominal 1/2" thick. The product comes in 9" wide x 8'-0" long (Shakes), or 7" or 8-3/4" wide x 10'-0" long (Savannah Smooth).

Installation:

General Installation Requirements:

Nichiha EX Series panels must be secured to walls framed with steel studs. Nichiha cedar shakes and smooth boards must be secured to walls framed with wood studs. Refer to each assembly for the maximum allowable spacing for the wall studs.

A weather resistive barrier is required in accordance with local building codes when installing Nichiha panels and boards. The weather resistive barrier must meet the requirements of the IRC and IBC.

Fasteners must be corrosion resistant fasteners, such as hot-dipped galvanized nails and screws that meet the requirements of the IRC and IBC along with applicable Texas Revisions. Stainless steel fasteners are highly recommended in high-humidity and high-moisture regions. The manufacturer states that aluminum fasteners, staples, clipped head or T-head nails, or fasteners that are not rated or designed for intended use must not be used for the installation of the assemblies specified in this evaluation report. Refer to Nichiha's AWP and Sierra/Savannah installation instructions for more detailed information.

Wind Resistant Assemblies:

STEEL FRAMING APPLICATIONS

Assembly No. 1

EX Series Panel Siding

The following products are applicable: 5/8", 3/4", and 7/8" thick panel siding; 17-7/8" width or less; the panels have shiplap edges and ends

Panel Clips: Nichiha Part No.'s JEL777/787, 2'-2" long

Fastener: No. 10-16 x 1-1/4" long pan head screw

Starter Track: Nichiha Part No. FA700; 1-3/16" high press formed steel

Wall Framing: 6" CSJ steel studs, 16-gauge, 1-5/8" legs, spaced a maximum of 16" o.c.

Design pressure: -74.6 psf

Installation: A starter track, Nichiha Part No. FA700, provided by Nichiha, is fastened to the bottom of the steel framing members with one No. 10-16 x 1-1/4" long screw per wall stud. The starter track must be continuous. The bottom most course must be inserted into the starter track. The steel panel clips, Nichiha Part No.'s JEL777/787, are secured to the steel wall studs with one No. 10-16 x 1-1/4" long screw at each steel framing member. The steel panel clips are applied to the wall studs horizontally along the top and bottom of each panel. The clips must be fastened over each stud. The panel top and bottom are inserted into the steel panel clips. The top edge of the highest course is face fastened with one No. 10-16 x 2" long, self-drilling metal screw at each framing member with a 3/8" green spacer, provided by Nichiha, between the back of the panel and stud. Face screws are placed at least 1" down from the top edge of the final course. All fasteners must penetrate through the framing members a minimum of three threads.

Assembly No. 2

EX Series Panel Siding

The following products are applicable: 5/8", 7/8", and 7/8" thick panel siding; 17-7/8" width or less; the panels have shiplap edges and ends

Panel Clips: Nichiha Part No.'s JEL777/787, 2'-2" long

Fastener: No. 10-16 x 1-1/4" long pan head screw

Starter Track: Nichiha Part No. FA700; 1-3/16" high press formed steel

Wall Framing: 6" CSJ steel studs, 18-gauge, 1-5/8" legs, spaced a maximum of 16" o.c.

Design pressure: -48.7 psf

Installation: A starter track, Nichiha Part No. FA700, provided by Nichiha, is fastened to the bottom of the steel framing members with one No. 10-16 x 1-1/4" long screw per wall stud. The starter track must be continuous. The bottom most course must be inserted into the starter track. The steel panel clips, Nichiha

Part No.'s JEL777/787, are secured to the steel wall studs with one No. 10-16 x 1-1/4" long screw at each steel framing member. The steel panel clips are applied to the wall studs horizontally along the top and bottom of each panel. The clips must be fastened over each stud. The panel top and bottom are inserted into the steel panel clips. The top edge of the highest course is face fastened with one No. 10-16 x 2" long, self-drilling metal screw at each framing member with a 3/8" green spacer, provided by Nichiha, between the back of the panel and stud. Face screws are placed at least 1" down from the top edge of the final course. All fasteners must penetrate through the framing members a minimum of three threads.

Assembly No. 3

EX Series Panel Siding

The following products are applicable: 5/8" thick panel siding; 17-7/8" width; 119-5/16" long; the panels have shiplap edges and square cut ends

Vertical Starter Track: Nichiha Part No. F710T

Panel Clip: Nichiha Part No. JEL777, 2'-2" long

Fastener: No. 10-16 x 1-1/4" long pan head screw

Wall Framing: 6" CSJ steel studs, 18-gauge, 1-5/8" legs, spaced a maximum of 17-7/8" o.c.

Wall sheathing: Minimum 7/16" OSB or 1/2" plywood

Design pressure: -49.4 psf

Installation: The panels are applied vertically. The wall sheathing (OSB or plywood) is secured to the steel wall framing with No. 8 x 1" long Bugle head self-drilling screws. The fasteners are applied at 6" on center along the panel edges and 12" on center along intermediate framing members. A vertical starter track, Nichiha Part No. FA710T, is fastened to the bottom of the frame with one No. 10-16 x 1-1/4" long screw into each steel stud and halfway between into the framing or sheathing (overall vertical starter track fastener spacing is 9" on center). The steel panel clips, Nichiha Part No. JEL777, are secured to the steel wall studs with No. 10 x 1-1/4" long pan head self-drilling screws. Four fasteners are required for each clip. The clips are applied vertically over the sheathing aligned with the wall studs. Four clips per full-length panel are required. Ripped/cut vertical edges are secured with face fasteners, No. 8 x 2" long bugle head self-drilling screws every 12" on center with a 3/8" green spacer, provided by Nichiha, between the back of the panel and the sheathing. All fasteners must penetrate through the framing members a minimum of three threads.

WOOD FRAMING APPLICATIONS

Assembly No. 1

Nichiha Sierra Premium Cedar Shakes and Savannah Smooth Series

The following products are applicable: Panels 9" in width or less.

Fastener: 6d smooth shank nails (0.099 inch shank, 2" long)

Design pressure: -52.3 psf

Installation: Wall studs must be minimum Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 16" on center. The walls must be sheathed with APA rated 7/16" thick OSB or 1/2" thick plywood. A 3" wide starter strip needs to be cut horizontally from the panels, and fastened to the studs using 6d smooth shank nails. The first course of the panels must be installed horizontally with the bottom edge overlapping the starter strip by 1/8". The horizontal joints are installed overlapping 1-1/4". The vertical joints of the panels are to be fastened at each edge. One 6d nail must be used to fasten the panels to each stud.

Assembly No. 2**Nichiha Sierra Premium Series and Savannah Smooth Series(Blind Fasteners)**

The following products are applicable: Panels 9" in width or less.

Fastener: No. 8 x 2" long wood screws

Design pressure: -92.3 psf

Installation: Wall studs must be 2x6 Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 16" on center. The walls must be sheathed with APA rated 7/16" thick OSB or 1/2" thick plywood. A 3" wide starter strip needs to be cut horizontally from the panel, and fastened to the studs using 6d smooth shank nails. The first course of the panels must be installed horizontally with the bottom edge overlapping the starter strip by 1/8". The horizontal joints were installed overlapping 1-1/4" and fastened with No. 8 x 2" long wood screws located at 8" o.c., located at 1" from the top edge. The vertical joints of the panel are to be fastened at each edge.

Assembly No. 3**Nichiha Sierra Premium Series and Savannah Smooth Series (Face Fasteners)**

The following products are applicable: Panels 9" in width or less.

Fastener: No. 8 x 2-1/2" long wood screws

Design pressure: -123.24 psf

Installation: Wall studs must be 2x6 Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 16" on center. The walls must be sheathed with APA rated 7/16" thick OSB or 1/2" thick plywood. A 3" wide starter strip needs to be cut horizontally from the panel, and fastened to the studs using 6d smooth shank nails. The first course of the panels must be installed horizontally with the bottom edge overlapping the starter strip by 1/8". The horizontal joints were installed overlapping 2" and fastened with No. 8 x 2-1/2" long wood screws at 8" o.c. located 1" from the bottom edge, through itself and the previous course. The vertical joints of the panels are to be fastened at each edge.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.