

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION EC-58

Effective November 1, 2009

The following product has been evaluated for compliance with the wind loads specified in International Residential Code (IRC) and the International Building Code (IBC). This product shall be subject to January 2012.

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.

Nichiha EX series and Sierra Premium series, fiber-reinforced cement exterior siding, manufactured by

Nichiha Corporation (EX series & Sierra Premium series)
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will be acceptable for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

Nichiha EX series panel siding is nominal $\frac{3}{4}$ ", $\frac{7}{8}$ " or 1" thick. The siding is 18 inches wide and comes in lengths of 6 feet or 10 feet.

Sierra Premium Panels are a nominal $\frac{1}{2}$ " thick. The product comes in 9" wide x 8'-0" long (Shakes), or 7" or $8\frac{3}{4}$ " wide x 10'-0" long (Smooth).

INSTALLATION REQUIREMENTS

General Installation Requirements:

All NichiProducts™ shall be installed over wood structural sheathing attached to wood stud walls with studs spaced a maximum of 16" o.c.

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

Fasteners shall 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 shall not be used for the installation of the assemblies specified in this report. Refer to Nichiha's Brick, Stone & Block Panel installation instructions for more detailed information.

Sierra Premium™ Shake & Sierra Premium™ Smooth must be jointed on the stud, and should be staggered after installing the first course. For better appearance, 32" or more stagger is recommended. To avoid breakage or cracking, fasteners should be placed a minimum of $\frac{3}{4}$ " to 1" from the top edge and a minimum of $\frac{3}{8}$ " from panel edges. If face nailing is required, fasteners should be placed $\frac{3}{4}$ " from the bottom edge. Refer to Nichiha's Sierra Premium installation instructions for more detailed information.

Wind Resistant Assemblies:

WOOD FRAMING APPLICATIONS

Assembly No. 1

Nichiha EX Series Panel Siding

The following products are applicable: Panel siding 18 inches in width or less.
Fastener: 6d smooth shank nails (0.099 inch shank, 2 inch long)
Design pressure: -40 psf

Installation: Wall studs shall be minimum Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 16 inches on center. The walls shall be sheathed with APA rated $\frac{7}{16}$ " thick OSB or $\frac{1}{2}$ " thick plywood. A starter track, provided by Nichiha should be fastened to the bottom of the frame with one (1) 6d smooth shank fastened into wood framing members located at 16" o.c. The bottom most course shall be inserted into the starter track. The Nichiha aluminum short clips #JE403 shall be fastened with one (1) 6d smooth shank nail at each wood wall framing member. The Nichiha aluminum long clips #JE402 shall be used at the panel vertical joint locations. The long clips shall be fastened with one (1) 6d smooth shank nail per stud. Each siding panel is to be held in position at the top and bottom by inserting the edge of the panel into one lip of the clip. The topmost course shall be fastened with one 6d smooth shank nail at each framing member by placing a $\frac{1}{8}$ " cardboard spacer between the back of the panel and the stud and screwed at 1" from the top of the final course. Flashing, trim, and corners should be installed according to the manufacturer's specifications.

Assembly No. 2

Nichiha Sierra Premium Series

The following products are applicable: Panels 9 inches in width or less.
Fastener: 6d smooth shank nails (0.099 inch shank, 2 inch long)
Design pressure: -49.2 psf

Installation: Wall studs shall be minimum Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 16 inches on center. The walls shall be sheathed with APA rated $\frac{7}{16}$ " thick OSB or $\frac{1}{2}$ " 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 shall be installed horizontally with the bottom edge overlapping the starter strip by $\frac{1}{8}$ ". The horizontal joints are installed overlapping $1\frac{1}{4}$ ". The vertical joints of the panels are to be toe-nailed at each edge. One (1) 6d nail shall be used to fasten the panels to each stud.

Assembly No. 3

Nichiha Sierra Premium Series (Blind Fasteners)

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

Fastener: #6 x 2" long wood screws

Design pressure: -92.3 psf

Installation: Wall studs shall be 2" x 6" Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 16 inches on center. The walls shall be sheathed with APA rated $\frac{7}{16}$ " thick OSB or $\frac{1}{2}$ " 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 shall be installed horizontally with the bottom edge overlapping the starter strip by $\frac{1}{8}$ ". The horizontal joints were installed overlapping $1\frac{1}{4}$ " and fastened with #6 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 toe-nailed at each edge.

Assembly No. 4

Nichiha Sierra Premium Series (Face Fasteners)

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

Fastener: #8 x 2 $\frac{1}{2}$ " long wood screws

Design pressure: -123.24 psf

Installation: Wall studs shall be 2" x 6" Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 16 inches on center. The walls shall be sheathed with APA rated $\frac{7}{16}$ " thick OSB or $\frac{1}{2}$ " 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 shall be installed horizontally with the bottom edge overlapping the starter strip by $\frac{1}{8}$ ". The horizontal joints were installed overlapping 2" and fastened with #8 x 2 $\frac{1}{2}$ " 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 toe-nailed at each edge.

Note: The manufacturer's installation instructions shall be on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC) and the International Building Code (IBC).