Product Evaluation

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-59

Effective Date: September 1, 2014
Re-evaluation Date: September 2018

Product Name: Nichiha NichiBoard™ (smooth and primed cedar finish) and NichiPanel™ (smooth, primed cedar finish, stucco and grooved cedar finish), fiber-reinforced cement exterior siding and fiber-reinforced cement exterior cladding

Manufacturer: Nichiha USA, Inc.
6465 E. Johns Crossing, Suite 250
Johns Creek, GA 30097
(770) 805-9466

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:
NichiBoard™ lap siding is nominal 5/16" thick and is available in 6.25", 7.25", and 8.25"widths. The siding comes in 12**'** (144") lengths and are available in smooth or cedar texture.

NichiPanel™ siding is designed for vertical wall applications. The panels are available in 4**'** x 8**'**, 4**'** x 10**',** and 4**'** x 12**'** panels with a nominal thickness of 5/16" and in either smooth, cedar texture, stucco, or grooved cedar texture.

Installation Requirements:

General Installation Requirements:

All NichiProducts™ can be installed directly on wood frame or steel stud (20-guage or heavier) construction spaced at a maximum of 24" o.c. or over sheathing with wood or steel stud framing.

A weather resistive barrier is required in accordance with local building codes when installing NichiProducts. Use the approved weather resistive barrier (WRB) as defined by the IRC or IBC.

All fasteners shall be corrosion resistant as specified by the IRC, IBC, and the Texas Revisions.

Stainless steel fasteners are highly recommended in high humidity and high moisture regions. Do not use aluminum fasteners, staples, clipped head or T-head nails, or fasteners that are not rated or designed for intended use.

- **Wood Framing Applications**
  - **Assembly No. 1**
    - **Nichiha NichiPanel** 5/16" x 48" x 96"
    - **Fastener:** No. 8 x 1-5/8" long Flat Washer Head, Drivall Self Drilling Screws with GrabberGard coating. The screw is manufactured by Grabber, part #BGCB8158SD. The screw head is 0.406" average diameter with a 0.166" average thread diameter, these measurements include the coating.
    - **Design pressure:** -60.3 psf
    - **Installation:** Wall studs shall be minimum 2" x 6" No. 2 grade Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 24" on center. Lay down a NichiPanel sheet in the vertical orientation, which denotes the long edge of the panel is parallel to the studs. Place fasteners at 4" o.c. around the perimeter and 4" o.c. along the field studs. Locate perimeter fasteners 3/8" in from the edge of the panel.
  - **Assembly No. 2**
    - **Nichiha NichiPanel:** 5/16" x 48" x 96"
    - **Fastener:** No. 8 x 1-5/8" long Flat Washer Head, Drivall Self Drilling Screws with GrabberGard coating. The screw is manufactured by Grabber, part #BGCB8158SD. The screw head is 0.406" average diameter with a 0.166" average thread diameter, these measurements include the coating.
    - **Design pressure:** -37.2 psf
    - **Installation:** Wall studs shall be minimum 2" x 6" No. 2 grade Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 16" on center. Lay down a NichiPanel sheet in the vertical orientation, which denotes the long edge of the panel is parallel to the studs. Place fasteners 6" o.c. around the perimeter and 12" o.c. along the field studs. Locate perimeter fasteners 3/8" in from the edge of the panel.
  - **Assembly No. 3**
    - **Nichiha NichiPanel:** 5/16" x 48" x 96"
    - **Fastener:** 2-1/2" long, 8d, smooth shank, Off White N-164, Masonite Siding Nails, Item 6219-1116-35. The nail head is 0.313" average diameter, nail shank is 0.118" average diameter. These measurements include the coating. The nail is manufactured by Masonite Corporation.
    - **Design pressure:** -39.9 psf
    - **Installation:** Wall studs shall be minimum 2" x 6" No. 2 grade Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 16" on center. Lay down a NichiPanel sheet in the vertical orientation with the long edge of the panel is parallel to the studs. Place fasteners 8" o.c. around the perimeter and 8" o.c. along the field studs. Locate perimeter fasteners 3/8" in from the edge of the panel.
  - **Assembly No. 4**
    - **Nichiha NichiBoard:** 5/16" x 6.25"
    - **Fastener:** 1-3/4" long, Stormguard R-104 Double Hot Dipped Galvanized in Molten Zinc, Asphalt, and Fiberglass Shingle Nails manufactured by the W.H. Maze Company. The nail head is 0.365" average diameter, and the shank diameter is 0.125".
    - **Design pressure:** -37.4 psf
    - **Installation:** Wall studs shall be minimum 2" x 4" No. 2 grade Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 16" on center. Apply siding to the test specimen using 1-3/4" long roofing nails. Nail fasteners through the face of the panel so that the fasteners will be set flush to the surface or

slightly above. Set fasteners 1" down from the top edge of the leading course. The next course shall be set to overlap the proceeding course 1-1/4" and is considered a blind-nailed condition.

- **Assembly No. 5**
  - **Nichiha NichiBoard:** 5/16" x 7.25"
  - **Fastener:** 2" 6d CLH, 15-degree "Coil-ated", Double-dipped in Molten Zinc, Siding Nails manufactured by the W.H. Maze Company. The nail head is 0.237" average diameter, and the nail shank is 0.099" average diameter. These measurements include the galvanized coating. .
  - **Design pressure:** -76.3 psf
  - **Installation:** Wall studs shall be minimum 2" x 4" No. 2 grade Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 16" on center. Apply siding to the wood-framing members using 2" 6d siding nails. Nail fasteners through the face of the panel so that the fasteners will be set flush to the surface or slightly above. Set fasteners 1" up from the bottom edge of the leading course. The next course shall be set to overlap the proceeding course 1-1/4", and is considered a face-nailed condition.
- **Assembly No. 6**
  - **Nichiha NichiBoard:** 5/16" x 8.25"
  - **Fastener:** 2-1/2" 6d CLCEM117 15 degree "Coil-ated", Double hot dipped siding nails manufactured by the W.H. Maze Company. The nail head is 0.236" average diameter, and the nail shank is 0.097" average diameter. These measurements include the galvanized coating.
  - **Design pressure:** -61 psf
  - **Installation:** Wall studs shall be minimum 2" x 6" No. 2 grade Spruce-Pine-Fir (SPF) dimension lumber spaced a maximum of 16" on center. Apply siding to the wood-framing members using 2-1/2" 6d siding nails. Nail fasteners through the face of the panel so that the fasteners will be set flush to the surface or slightly above. Set fasteners 1" up from the bottom edge of the leading course. The next course shall be set to overlap the proceeding course 1-1/4", and is considered a face nailed condition.

- **Metal Framing Applications**
  - **Assembly No. 7**
    - **Nichiha NichiPanel:** 5/16" x 48" x 96"
    - **Fastener:** 0.100" x 1-1/2" long large head, conical wire coil, 200 per coil, Gripshank® steel pins. The pin is manufactured by Aerosmith Fastening Systems, VersaPin™, part #2385A. The pin head is 0.301" average diameter, pin shank is 0.106" average diameter. These measurements include the coating.
    - **Design pressure:** -29.3 psf
    - **Installation:** Wall studs shall be 6" CSJ Steel Studs, 20 gauge, with 1-5/8" legs. The track shall be 6" TSB steel track, 20-gauge, with 1-1/4" legs. Place studs on 16" on center. Place NichiPanel sheet vertically which indicates that the long edge of the panel is parallel to the studs. Place fasteners 8" o.c. around the perimeter and 8" o.c. along the center of the field studs. Locate perimeter fasteners 3/8" in from the edge of the sheathing.
  - **Assembly No. 8**
    - **Nichiha NichiPanel:** 5/16" x 48" x 96"
    - **Fastener:** No. 8 x 1-5/8" long Flat Wafer Head, Drivall Self Drilling Screws with GrabberBard coating, manufactured by Grabber, part #BGCB158SD. The screw head is 0.406" average diameter with a 0.166" average thread diameter. These measurements include the coating.
    - **Design pressure:** -32.3 psf
    - **Installation:** Wall studs shall be 20-gauge, 6" CSJ Steel Studs with 1-5/8" legs. The track shall be 20-gauge, 6" TSB steel track with 1-1/4" legs. Place studs on 16" centers. Place NichiPanel sheets vertically, which indicates that the long edge of the panel is parallel to the studs. Place fasteners 6" o.c. around the perimeter and 12" o.c. along the center of the field studs. Locate perimeter fasteners 3/8" in from the edge of the sheathing.

- **Assembly No. 9**
  - **Nichiha NichiBoard:** 5/16" x 7.25"
  - **Fastener:** 0.100" x 1-1/2" long large head, conical wire coil, 200 per coil, Gripshank® steel pins. The pin is manufactured by Aerosmith Fastening Systems, VersaPin™, part #2385A. The pin head is 0.301" average diameter, pin shank is 0.106" average diameter. These measurements include the coating.
  - **Design pressure:** -78.7 psf
  - **Installation:** Wall studs shall be 20-gauge, 6" CSJ Steel Studs with 1-5/8" legs. The track shall be a 20-gauge, 6" TSB steel track with 1-1/4" legs. Place studs on 16" on center. Set fasteners 1" up from the bottom edge of the leading course. The next course shall be set to overlap the proceeding course 1-1/4", and is considered a face nailed condition.

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