



DIVISION: 07 00 00—THERMAL AND MOISTURE
Section: 07 46 33—Plastic Siding

REPORT HOLDER:

NEWTECHWOOD AMERICA, INC.

EVALUATION SUBJECT:

NEWTECHWOOD US09 TONGUE AND GROOVE ALL WEATHER SIDING BOARDS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018 and 2015 *International Building Code*® (IBC)
- 2021, 2018 and 2015 *International Residential Code*® (IRC)

Properties evaluated:

- Structural
- Durability
- Surface-burning characteristics
- Ignition Resistance

2.0 USES

The NewTechWood US09 Tongue and Groove All Weather Siding Boards described in this evaluation report are intended for use as an exterior wall cladding or interior wall finish in all types of construction under the IBC and dwellings constructed in accordance with the IRC.

3.0 DESCRIPTION

3.1 Materials:

3.1.1 US09 Tongue and Groove All Weather Siding: The NewTechWood US09 Tongue and Groove All Weather Siding Boards are a wood-plastic manufactured composite product consisting of rice hulls, high-density polyethylene (HDPE), and other processing additives. The US09 boards are manufactured by a co-extrusion process with an integrated shell heat-pressed onto the core of the siding boards in accordance with the approved quality control manual. The US09 boards measure 5½ inches by ½ inch (140 mm by 12.7 mm) with a tongue and groove profile along the board edges. The product is available in various colors and in lengths up to 16 feet (4.88 m). See Figure 1.

3.1.2 Aluminum Attachment Accessories: ASTM B221 6063-T5 aluminum mounting clips (part number AW-08) and continuous extruded aluminum starter strips (part number AW-02) are used to attach the US09 Tongue and Groove All Weather Siding to the building substrate. The

AW-08 aluminum mounting clips measure approximately 0.79 x 0.57 x 1.14 inch (20 x 14.5 x 29 mm). The AW-02 aluminum starter strips measure approximately 0.66 x 0.57 inch (16.8 x 14.5 mm) and are available in lengths up to 3feet (0.91 m). See Figure 2.

3.1.3 Spacer: The spacers (part number T-07) are manufactured from EPDM rubber and are used to maintain the board spacing from the building for the final course (see Figure 2).

3.2 Durability:

When subjected to weathering, and other decaying elements, the US09 Tongue and Groove All Weather Siding. The boards have been evaluated for structural capacity when exposed to temperatures from 20°F to 125°F (-29°C to 52°C).

3.3 Surface-burning Characteristics:

When tested in accordance with ASTM E84, the US09 Tongue and Groove All Weather Siding Boards are considered to be a Class C finish in accordance with Section 803.1.2 of the 2021 and 2018 IBC (Section 803.1.1 of the 2015 IBC). Additionally, the boards exhibit a flame spread index of no greater than 200 in accordance with Section R302.9.1 of the IRC.

4.0 DESIGN AND INSTALLATION

4.1 General:

Installation of the NewTechWood US09 Tongue and Groove All Weather Siding Boards must comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at the jobsite at all times during installation. When the manufacturer's published installation instructions differ from this report, this report governs.

4.2 Design:

The NewTechWood US09 Tongue and Groove All Weather Siding Boards have a maximum allowable transverse wind load capacity of 45 psf (2.15 kPa) when installed in accordance with Section 4.3; other methods of attachment are outside of the scope of this report.

4.3 Installation:

NewTechWood US09 Tongue and Groove All Weather Siding Boards may be installed in either vertical or horizontal configurations. The boards may be installed directly to the building framing through the exterior sheathing, to furring strips or to other solid building substrates such as concrete masonry (CMU).

A continuous aluminum starter strip (part AW-02) is attached to the building substrate with #8 stainless steel pan

head screws spaced a maximum of 15-3/4 inches (400 mm) on center. The groove on the first course of NewTechWood US09 Tongue and Groove All Weather Siding boards is placed over the starter strip. See Figure 3.

The top of the first course and each subsequent course is attached to the building substrate with aluminum clips (part AW-08) and #8 stainless steel pan head screws at a maximum spacing of 15-3/4 inches (400 mm) on center (see Figure 3). Each board is locked to one of the AW-08 clips using a single #5 x 1-1/4 inch (31.8mm) stainless steel flat head screw; boards are only locked at a single location to allow for expansion and contraction of the remainder of the board (see Figure 4).

Prior to placement of the final course, the EPDM spacers (part # T-7) are attached to the substrate using #8 stainless steel pan head screws at a maximum spacing of 15-3/4 inches (400 mm) on center. The final board is cut to the proper width to match the top or edge of the wall, and the board is fastened directly to the building substrate with a #10 stainless flat head wood screw. The EPDM spacer and wood screw must be placed as shown in Figure 5.

4.3.1 Use on Exterior Walls in Types I, II, II and IV Construction for Wall Heights of 40 Feet or Less in Accordance with 2021 and 2018 IBC Section 1405.1 (2015 IBC Section 1406.2 (Ignition Resistance)):

The NewTechWood US09 Tongue and Groove All Weather Siding boards may be used on the exterior side of exterior walls on buildings of Type I, II, III or IV construction when the exterior wall is sheathed with a code compliant sheathing or solid substrate that is permitted for use in Types I-IV construction. The minimum fire separation distance must be 10 feet. The installation of the siding must comply with the applicable requirements in 2021 and 2018 Section 1405.1 (2015 IBC Section 1406.2).

5.0 CONDITIONS OF USE

The NewTechWood US09 Tongue and Groove All Weather Siding Boards described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The US09 Tongue and Groove All Weather Siding Boards must be backed by a code compliant sheathing or a code compliant solid substrate. The substrate and framing to which the US09 Tongue and Groove All Weather Siding boards must be designed for the applicable positive and negative wind loads. Design of the substrate and framing must be performed by a registered design professional and is outside the scope of this report.
- 5.2 The fasteners by which the US09 Tongue and Groove All Weather Siding Boards are attached must be designed for the applicable positive and negative wind loads. Design of the attachment must be performed by a registered design professional and is outside of the scope of this report.

- 5.3 A water-resistive barrier must be provided as required by the applicable code. When used in Types I-IV construction, the water-resistive barrier must have a flame spread rating of 25 or less and a smoke developed index of 450 or less in accordance with ASTM E84 or UL723.
- 5.4 US09 Tongue and Groove All Weather Siding Boards are limited to installations in which the clearance between the siding and earth on the exterior of a building is not less than 6 inches (152 mm) or less than 2 inches (51 mm) vertical from concrete steps, porch slabs, patio slabs and similar horizontal surfaces exposed to the weather in accordance with IBC Section 2304.12.1.5.
- 5.5 Fire resistance rated wall assemblies are outside of the scope of this report.
- 5.6 Compatibility of the supporting construction materials with all fasteners and other hardware components is subject to approval by the code official.
- 5.7 Only those types of fasteners and fastening methods described in this report have been evaluated for the installation of the US09 Tongue and Groove All Weather Siding Boards; other attachment methods are outside the scope of this report.
- 5.8 The US09 Tongue and Groove All Weather Siding Boards are produced in Daling, Huidong, Guangdong Province, China, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Wood-Plastic Composite Products Used as Exterior Siding (AC524), dated June 2021.

7.0 IDENTIFICATION

- 7.1 The NewTechWood US09 Tongue and Groove All Weather Siding Boards described in this report are identified by a label on each individual piece, or on the packaging, bearing the ICC-ES Evaluation Report number (ESR-3923), the manufacturer's name (NewTechWood) and address, the product name (NewTechWood US09 boards) and the date of manufacturing. The packaging for the attachment accessories is identified by a label bearing the ICC-ES Evaluation Report number (ESR-3923) and the manufacturer's name (NewTechWood) and address.
- 7.2 The report holder's contact information is the following:

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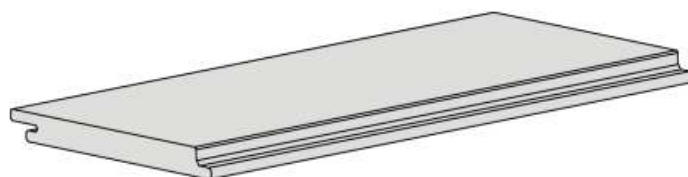


FIGURE 1—US09 TONGUE AND GROOVE ALL WEATHER SIDING BOARD



FIGURE 2—FROM LEFT TO RIGHT: AW-02 STARTER STRIP; AW-08 CLIP; T-07 EPDM SPACER

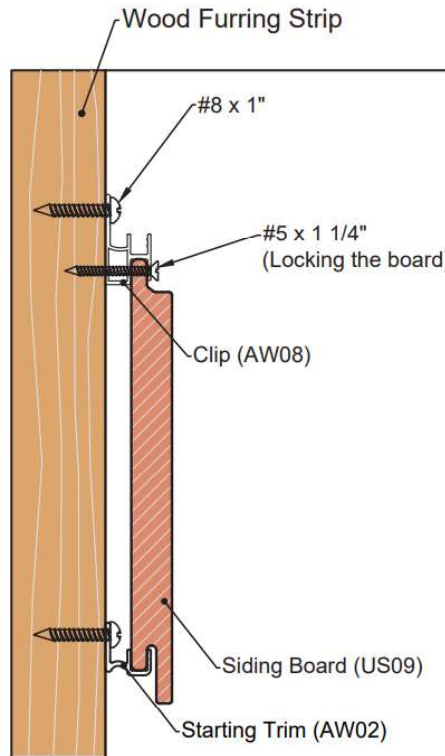


FIGURE 3—ALUMINUM STARTER STRIP AND ALUMINUM CLIP INSTALLATION DETAIL

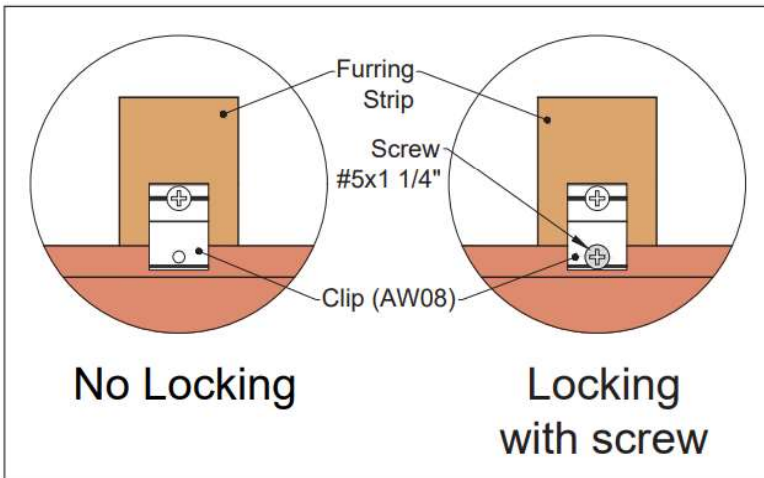


FIGURE 4—BOARD LOCKING DETAIL (EACH BOARD LO—CKED AT A SINGLE LOCATION)

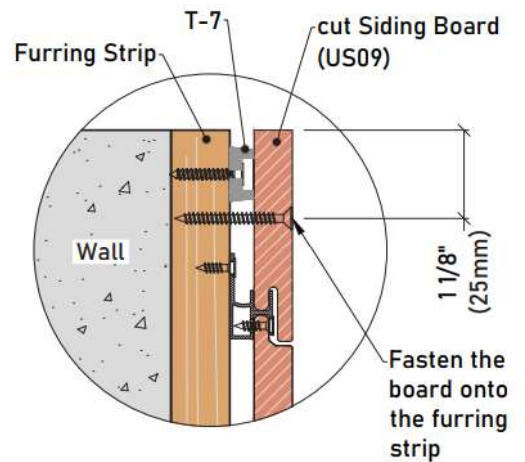


FIGURE 5—INSTALLATION DETAIL FOR FINAL BOARD

