

Siding Installation Information

Moisture Content

As wood loses or gains moisture, it will shrink or swell until it reaches equilibrium with the level of moisture in the air of its immediate surroundings. Because of its cell structure, wood shrinks primarily in thickness and width and very little in length.

Wood siding is no exception. It will shrink and swell regardless of pattern or material quality. Problems can occur after installation if the siding shrinks or swells unevenly or very rapidly, particularly if it has been improperly nailed and its natural movement has been restricted. However, problems such as twist, cup, warp, splits and checks can be minimized.

To avoid potential problems and to minimize dimensional change after installation, the moisture content of the siding should match the local climate as closely as possible at the time of installation.

For instance, if the climate in a particular region causes wood to maintain 9% to 14% moisture content, then the moisture content of the siding should be within that range when installed.

Siding Storage

All siding may pick up or lose moisture in transit or storage so it is important to allow it to acclimate with the surrounding air of its final site prior to installation.

Stack the siding on evenly spaced, vertically aligned stickers (spacers between the layers) in an area where there will be good air flow through the stack. This should be done in an open garage or other area that is protected from the elements.

If stacked over concrete, use 2x4s or 2x6s on edge to elevate the first course of siding at least 3½ inches above the surface of the concrete. If the stack is over wet ground or wet concrete, lay down a vapor barrier so the wood doesn't pick up moisture from beneath the stack.

Allow air to flow through and around the stack for a week to 10 days for dry siding, prior to installation.

Source: Western Wood Products Association (WWPA) Technical Guide Natural Wood Siding 2007

MOISTURE CONTENT GUIDELINES

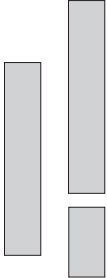
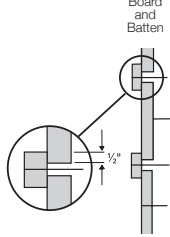
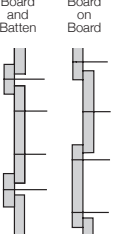


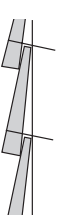


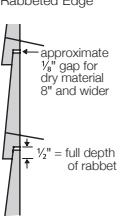
Use of Wood in Exterior	Recommended Moisture Content at Time of Installation					
	Most Areas of the U.S.		Dry, Southwestern States		Damp, Warm South-eastern Coastal Areas	
Siding, Trim and Sheathing	Average ¹	Individual Pieces	Average ¹	Individual Pieces	Average ¹	Individual Pieces
		12%	9-14%	9%	7-12%	12%

¹To obtain a realistic average, test at least 10% of each item, i.e. 10% of the siding pieces, 10% of the trim pieces and random checks of the sheathing material. It is particularly important to check the sheathing prior to the siding application if it has become wet after installation.

Source: Wood Handbook, 1999, from Table 12-2.

SIDING PATTERNS, NOMINAL SIZES & RECOMMENDED NAILING

*Note: Refer to WWPA's Standard Patterns (G-16) for scale profiles and actual dimensions of run-to-pattern products.

Siding Patterns	Nominal Sizes* Thickness & Width	Nailing 6" and Narrower	8" and Wider
 <p>TRIM BOARD-ON-BOARD BOARD-AND-BATTEN Boards are surfaced smooth, rough or saw-textured. Rustic ranch-style appearance. Provide horizontal nailing members. Do not nail through overlapping pieces. Vertical applications only.</p>	1 x 2 1 x 4 1 x 6 1 x 8 1 x 10 1 x 12 1¼ x 6 1¼ x 8 1¼ x 10 1¼ x 12	 <p>Board and Batten</p> <p>Recommend ½" overlap. One siding or box nail per bearing.</p>	 <p>Board and Batten Board on Board</p> <p>Increase overlap proportionately. Use two siding or box nails, 3-4" apart.</p>
 <p>BEVEL or BUNGALOW Bungalow ("Colonial") is slightly thicker than Bevel. Either can be used with the smooth or saw-faced surface exposed. Patterns provide a traditional-style appearance. Recommend a 1" overlap. Do not nail through overlapping pieces. Horizontal applications only. Cedar Bevel is also available in ⅞ x 10, 12.</p>	½ x 2 ½ x 4 ½ x 5 ½ x 6 ⅝ x 8 ⅝ x 10 ¾ x 6 ¾ x 8 ¾ x 10	 <p>Plain</p> <p>Recommend 1" overlap. One siding or box nail per bearing, just above the 1" overlap.</p>	 <p>Plain</p> <p>Recommend 1" overlap. One siding or box nail per bearing, just above the 1" overlap.</p>
 <p>DOLLY VARDEN Dolly Varden is thicker than Bevel and has a rabbeted edge. Surfaced smooth or saw-textured. Provides a traditional-style appearance. Allows for a ½" overlap, including an approximate ¼" gap. Do not nail through overlapping pieces. Horizontal applications only. Cedar Dolly Varden is also available in ⅞ x 10, 12.</p>	Standard Dolly Varden ¾ x 6 ¾ x 8 ¾ x 10 Thick Dolly Varden 1 x 6 1 x 8 1 x 10 1 x 12	 <p>Rabbeted Edge</p> <p>Allows for ½" overlap. One siding or box nail per bearing, 1" up from bottom edge.</p>	 <p>Rabbeted Edge</p> <p>allows for ½" gap for dry material 8" and wider</p> <p>½" = full depth of rabbet</p> <p>Allows for ½" overlap. One siding or box nail per bearing, 1" up from bottom edge.</p>

Siding Patterns

**Nominal Sizes*
Thickness & Width**

**Nailing
6" and Narrower**

8" and Wider

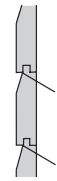


DROP

Drop siding is available in 13 patterns, in smooth, rough or saw-textured surfaces. Some are T&G, others shiplapped. Refer to *Standard Patterns* (G-16) for dimensional pattern profiles. A variety of looks can be achieved with the different patterns. Do not nail through overlapping pieces. Horizontal or vertical applications. Tongued edge up in horizontal applications.

$\frac{3}{4}$ x 6
 $\frac{3}{4}$ x 8
 $\frac{3}{4}$ x 10

T&G Patterns

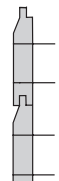


Shiplap Patterns

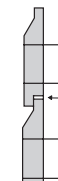


Use casing nails to blind nail T&G patterns, one nail per bearing. Use siding or box nails to face nail shiplap patterns, 1" up from bottom edge.

T&G Patterns



Shiplap Patterns



Use two siding or box nails, 3-4" apart to face nail, 1" up from bottom edge.

approximate $\frac{1}{2}$ " gap for dry material 8" and wider
 $\frac{1}{2}$ " = full depth of rabbet



TONGUED & GROOVED

Tongued & Grooved siding is available in a variety of patterns. T&G lends itself to different effects aesthetically. Refer to *Standard Patterns* (G-16) for pattern profiles. Sizes given here are for Plain Tongued & Grooved. Do not nail through overlapping pieces. Horizontal or vertical applications. Tongued edge up in horizontal applications.

1 x 4
1 x 6
1 x 8
1 x 10
1 x 12

Note: T&G patterns may be ordered with $\frac{1}{4}$ ", $\frac{3}{8}$ ", or $\frac{1}{2}$ " tongues. For wider widths, specify the longer tongue and pattern.

Plain

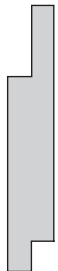


Use one casing nail per bearing to blind nail.

Plain



Use two siding or box nails 3-4" apart to face nail.



CHANNEL RUSTIC

Channel Rustic has a $\frac{1}{2}$ " overlap, including an approximate $\frac{1}{8}$ " gap, and a 1" to $1\frac{1}{4}$ " channel when installed. The profile allows for maximum dimensional change without adversely affecting appearance in climates of highly variable moisture levels between seasons. Available smooth, rough or saw-textured. Do not nail through overlapping pieces. Horizontal or vertical applications.

$\frac{3}{4}$ x 6
 $\frac{3}{4}$ x 8
 $\frac{3}{4}$ x 10



Use one siding or box nail to face nail once per bearing, 1" up from bottom edge.



Use two siding or box nails 3-4" apart per bearing.

approximate $\frac{1}{2}$ " gap for dry material 8" and wider
 $\frac{1}{2}$ " = full depth of rabbet



LOG CABIN

Log Cabin siding is $1\frac{1}{2}$ " thick at the thickest point. Ideally suited to informal buildings in rustic settings. The pattern may be milled from appearance grades (Commons) or dimension grades (2x material). Allows for $\frac{1}{2}$ " overlap, including an approximate $\frac{1}{8}$ " gap. Do not nail through overlapping pieces. Horizontal or vertical applications.

$1\frac{1}{2}$ x 6
 $1\frac{1}{2}$ x 8
 $1\frac{1}{2}$ x 10
 $1\frac{1}{2}$ x 12



Use one siding or box nail to face nail once per bearing, $1\frac{1}{2}$ " up from bottom edge.



Use two siding or box nails, 3-4" apart, per bearing to face nail.

approximate $\frac{1}{2}$ " gap for dry material 8" and wider
 $\frac{1}{2}$ " = full depth of rabbet

Nail Penetration and Spacing

Recommended penetration into studs or blocking, or into a combination of wood sheathing and these members, is $1\frac{1}{2}$ ". Penetration is $1\frac{1}{4}$ " with ring shank nails.

Vertical siding, when applied over wood-based sheathing, should be nailed to horizontal blocking or other wood framing members not exceeding 36" on center when face-nailed, or 32" on center when blind-nailed.

Vertical siding, when installed without sheathing, should be nailed to wood framing or blocking members at 24" on center. Some building codes require 24" on center with or without sheathing; check your local code to verify requirements. Cut bevel (scarf) joints for vertical installations.

Horizontal and diagonal siding should be nailed to studs at 24" on center maximum when applied over wood-based, solid sheathing and 16" on center maximum when applied without sheathing.

The siding pattern will determine the exact nail size, placement and number of nails required. (Refer to diagrams.) Nails are placed to allow the wood to move, that is to shrink and swell, as well as to adequately hold the siding in place.

As a general rule, each piece of siding is nailed independently of its neighboring pieces. Do not nail through two overlapping pieces of siding with the same nail as this practice will restrict the natural movement of the siding and may cause unnecessary problems. Nail joints into the studs or blocking members.

Drive nails carefully. Hand nailing is preferred over pneumatic nailing because there is less control of placement and driving force with pneumatic nailers. Nails should be snug, but not overdriven. Nails that are overdriven can distort the wood and may cause excessive splitting. Overdriven nails also provide an avenue for moisture to collect and move through the piece. Predrilling near the ends will help reduce any splitting that can occur with thinner patterns.

For additional information regarding pneumatic nailing, contact the International Staple, Nail and Tool Association at www.isanta.org

Source: WWSA Technical Guide Natural Wood Siding 2007

Colored nails and screws that complement windswept colors
(Nailing and fastening siding to wood based sheathing is not recommended)
Brand: Simpson Strong-Tie

Windswept Colors.....	Nail / Screw Colors
Barn Gray.....	Azek Gray
Homestead	Brown
Cowboy.....	Acorn
Wagon Red	Jatoba
Prairie.....	Brown

Source: WWSA Technical Guide Natural Wood Siding 2007

NOTES:

- Some patterns allow for greater dimensional change than others. Patterns such as bevel siding and channel rustic have the capability of greater joint movement than patterns such as tongue and groove.
- Apply siding over building paper.