



INSTALLATION AND MAINTENANCE INSTRUCTION FOR THERMA PRODUCTS



Thermo-Treated Wood – is Real Wood

- ✓ Cut it, sand it, nail it, drill it, paint or stain it as you would practically any standard lumber
- ✓ Beautiful color and greater workability

Our unique thermal-modification process applied to lumber turns wood into a durable and beautiful looking product without using any chemicals. The changes happen on a molecular level, but physically it's the same species of wood. You can use Thermo-Treated Wood (TTW) like you would regular, non-treated wood. Cut it, sand it, nail it, drill it, paint or stain it as you would practically any standard-grade lumber, using the same standard tools. TTW is drier (4% EMC), lighter in weight and a little more brittle than non-treated wood. Unlike other exterior products, TTW is evenly modified throughout so you're assured of the same performance and look from board center to outside edge. No extraordinary care is needed after sawing and machining TTW - it's characteristics and color are consistent throughout the product.

Structural Applications of Thermo-Treated Wood

- ✓ 16" span center-to-center / 12" for stairs and commercial applications

The strength of wood has a strong correlation with density. TTW has 10-25% lower weight and density compared to non-treated wood of the same species. Due to decreased strength, TTW is not used for joists, stringers, beams, support posts, columns or other load-bearing applications. Use 16" on-center span for decks, 12" for stairs treads and 12" for decks and stairs in commercial applications. Deck boards shall extend across a minimum of three joist bays and terminating board ends shall lie on joist centers. A 1/4" gap between adjacent deck boards is recommended as TTW will install dry (~4% MC) so minimal shrinkage will be present.

Ground Contact and Termite Resistance

- ✓ Direct ground contact for non-structural applications

Direct ground contact is allowed where structural performance is not critical and periodic drying of the surfaces is allowed. This is especially apparent when the ground has good drainage and is made up of sand. Also, due to bacteria in the air or dirt carried in rain, when TTW is positioned near the ground, fungi can grow on the surface. However, this is on the surface only and can be removed by wiping or scraping. We recommend keeping Therma Decking and Therma Siding at least 2" above grade.

Therma Products have improved termite resistance, as we dry the wood and burn all sugar and resins during thermo-treatment. Nevertheless, for areas with increased termite activity we recommend using additional protection.

Cutting. Drilling. Nailing

- ✓ Saws: 30-tooth and more
- ✓ Use sharp Drill Bits
- ✓ Pre-drill holes for nailing



Pay special attention to saw and tool coarseness/fineness for best results. Saw speed will have an effect on the cut quality: generally, the higher the saw power, the better the cut quality.

Radial and Table Chop Saws – Use blades (10") with greater than 30-tooth carbide tips for optimal results.

Circular Saws – For 7-1/4" circular saws, use a 36–40 tooth carbide tipped blade for optimal results – fewer teeth will result in a coarse cut, especially at board ends. Be sure to use sharpened blades to ensure clean cuts.

Hand Saws – Standard wood handsaws work well with TTW. Pay careful attention to the saw tooth count and blade type for optimal cutting performance. Fine tooth crosscut saws work best.

Drilling – Use standard woodworking bits; however, extra attention should be taken when drilling near edges to avoid wood splitting. Using sharp bits and attention to tool pressure will help improve end results. Coarse, flathead borer bits will tear and split the wood; we recommend standard, round drill bits.

Nailing - Pre-drill holes if using nails. For deck surface nailing 16D common is the maximum nail size allowed and a 10D common is the minimum. For siding we recommend using from # 8 till # 16 nails with a nail gun or hammer. Spiral-shank nails provide additional holding power. Nails must be exterior-grade (stainless steel is the best). Use hammers gently due to the increased brittleness of TTW.

Siding Installation

- ✓ Furring strips

Install wood siding over furring strips (use 1 or 2 foot span) for ventilation. Use outdoor rated nails or screws. Use finishing nails or installation clips for T&G siding for the hidden look. Nailing into the edges of the wood IS NOT RECOMMENDED. Either side (V-joint or square T&G) serves as a face.

Face Down Decking Fastening

- ✓ Use self-tapping Screws

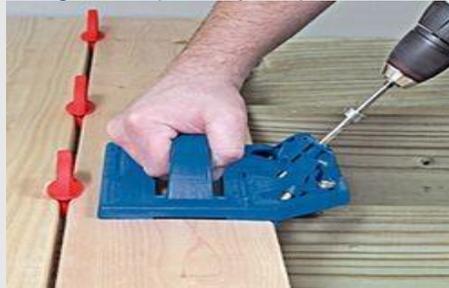
Stainless steel coarse-thread screws work well with TTW. Keep in mind the following tips:

- ✓ Usage of self-tapping composite decking screws (stainless steel are the best) providing the best result, otherwise pre-drill holes if use nails and screws.
- ✓ Fasteners should be applied a minimum of 5/8" from board edge and a minimum of 1" from the board ends.
- ✓ Face-fastening with screws provide optimum holding conditions.

KREG Hidden Fastening System



- ✓ If using standard plastic or metal clips which require grooves, make small local grooves (biscuit joints) with a router to match the shape of the desired clips.



Oiling and Painting

- ✓ Product comes 4-side factory oiled (good for first 1-2 years)

- ✓ Re-oil every 1-2 years

- ✓ Use Clear sealant with UV-protection



Oiling is strongly recommended for exterior applications to protect the TTW performance (against silvering and surface checking in direct sunlight and weather exposure). A sealant with UV protection should be used.

ThermoA Products come four-side factory oiled which is good for the first one to two years depending on the place of installation and sun exposure. We use a widely available Thompson Clear Water sealer with UV protection. For the next oiling period, you can use the same oil or any clear/ semi-transparent solvent-based finish. This allows the beautiful wood grain of TTW to be shown.

TTW accepts a variety of wood finishes well; however we recommend monitoring the results of coating applications to be sure that it created a protective screen on the surface. Usually a second coat leads to the best results.

The following brands have been tested with TTW: Thompson's WaterSeal Clear (available in Lowe's), Penofin, Protego. Different oils darken TTW differently so check the color before you apply oil. Oil based sealants work best with TTW.

If you missed oiling and the wood starts fading (turns lighter brown or starts silvering), you can restore the original color by sanding the surface of the deck before application of new oil.

For optimal results:

- ✓ All cut ends need to be either wax sealed (Anchorseal is one example of this) or oil the cut ends.
- ✓ Apply coating to ALL surfaces of the product.

Care and Maintenance

- ✓ Thermo-treated wood is a **LOW-MAINTENANCE** product
NOT A NON-MAINTENANCE product

Cleaning - Specific cleaning requirements for TTW may vary with climate, use, and traffic. However, because TTW is real wood, we advise against the usage of harsh chemicals or power-washing as this can damage the finish of any wood product.

Coating – Our treatment gives the wood a rich, exotic color which will silver over time if not treated with a UV-resistant sealant or stain. Because of the wood's natural state, some boards may check. This checking has no effect on the long term durability of the product, nor does it affect TTW's resistance to rot and decay. To enhance the product's performance against fading and checking, we recommend a semi-transparent or clear oil treatment with UV protection.

Maintenance intervals - Maintenance intervals may vary with climate, use, and traffic, and also depends on the maintenance recommendations of the coating manufacturer. Periodic inspection of the surface is recommended for optimal product performance and beauty. Usually a one- or two-year oiling interval provides the best performance.