

THERMAL

PRO

A Spartan Forest Products Brand

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CLADDING PRODUCTS

THERMAL PRO





ADVANCING THE WAY WOOD IS MODIFIED

Hydrolysis 2.0 Thermal Modification Process

Thermal modification has long been used to improve the performance of wood. Hydrolysis 2.0 takes that technology further. By combining lower temperatures with controlled pressure, it provides a more precise approach to modifying wood at the cellular level.

From High Heat to Controlled Modification

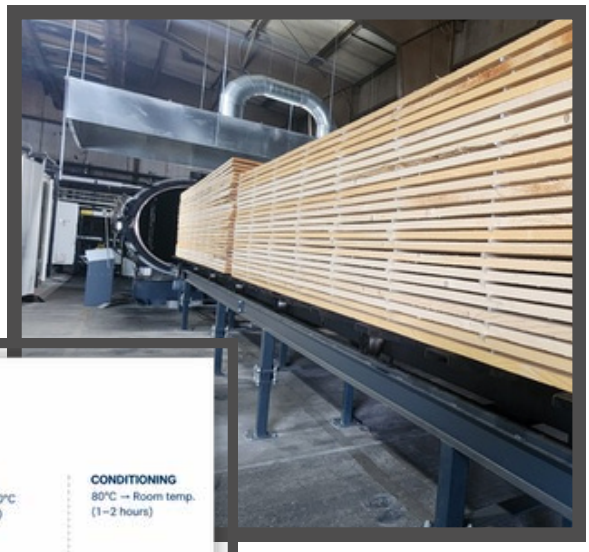
Traditional thermal modification relies on extremely high temperatures to transform the wood. Hydrolysis 2.0 takes a different approach—using high pressure to accelerate the process while reducing the temperature required for modification. The result is a more controlled process with less thermal stress than conventional high-heat treatment.

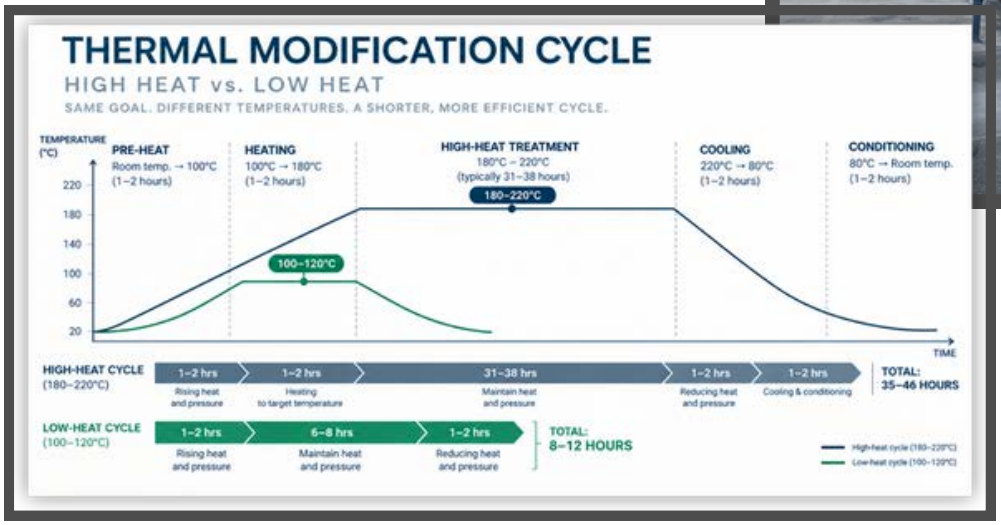
Better Performance Starts With a Better Process

Hydrolysis 2.0 is engineered to address some of the limitations associated with conventional thermal modification:

- Up to 50% less brittleness compared with conventional high-temperature processing
- Improved structural integrity by reducing damage to the wood's cellulose fibers
- Better machinability for milling, profiling, and fabrication
- More consistent modification from surface to core
- Reduced thermal stress throughout the material
- Lower energy requirements than traditional high-temperature processes

The result is a thermally modified material that is stronger, more workable, and more predictable.





ENHANCED BENEFITS



Increased Durability

Lower-temperature processing reduces damage to the wood's cellular structure, preserving more of its natural strength while still delivering the moisture resistance and decay protection of thermal modification. The result is tougher, less brittle wood built for long-term performance.



Improved Aesthetics

Lower-temperature modification preserves more of the wood's natural color, grain, and character, giving designers greater control over the final aesthetic while delivering enhanced stability and durability.



More Species

Reduced thermal stress allows ThermalPro to modify a broader range of wood species that may not tolerate conventional high-heat processing—giving architects and designers access to lighter colors, rustic grades, and greater natural character.



Larger Dimensions

High pressure drives modification deep and evenly through the wood, while lower temperatures reduce the risk of overheating the exterior. This combo enables thorough modification of larger dimensions, including timbers up to 8", expanding possibilities for substantial architectural elements.

Movement Resistant

Weather Resistant

Non-Toxic

Longer Lifespan

High Solar Index

Sustainable & Renewable

Why Specify ThermalPro Wood?

More species. Larger dimensions. Made for your design.
ThermalPro Wood combines the beauty of natural wood with **advanced performance** and made-to-order flexibility. From species and dimensions to custom profiles and finishes, we work with architects and designers to create solutions tailored to the project—not limited by a standard product line.

Our low-temperature, high-pressure technology delivers a more stable, durable, and workable material with greater **freedom to customize**, detail, and specify wood around your design vision.

Your vision. Your specifications. Made to order.

thermalprowood.com







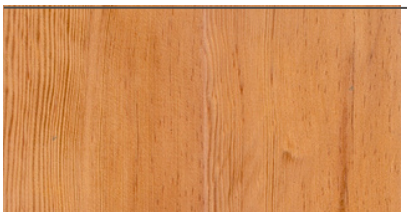
3 THERMALPRO CLADDING

STANDARD SPECIES

THERMAL PRO

Our standard thermally modified cladding species are shown below, but they are only the beginning. Hydrolysis 2.0 allows us to modify a much broader range of hardwoods and softwoods—contact us to explore additional species for your design.

SOFTWOODS



Douglas Fir

Known for its strength, straight grain, and warm character, modified Doug Fir is well-suited for larger-scale applications, substantial profiles, timbers, and architectural elements.



Eastern Hemlock

Naturally rustic and rich in character, Eastern Hemlock features distinctive grain, knots, and natural variation that create an authentic, textured aesthetic.



Vertical Grain Western Hemlock

With its clean vertical grain, refined texture, and consistent appearance, Western Hemlock offers a sophisticated, contemporary aesthetic. An excellent choice for high-end cladding.



Southern Yellow Pine

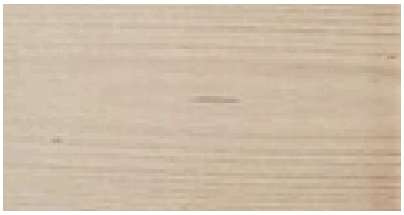
With its bold grain, natural warmth, and excellent stainability, Southern Yellow Pine offers exceptional versatility for architectural cladding. It responds beautifully to stains, oils, and custom finishes.

HARDWOODS



Ash

A premium North American hardwood, Ash combines exceptional durability with a bold, distinctive grain and rich, refined appearance. Its strength and dimensional stability make it ideal for demanding architectural cladding, while its pronounced grain creates visual depth and character. An excellent choice for high-end applications.



Maple

An ultra-premium hardwood for distinctive architectural cladding, thermally modified Maple offers a sophisticated appearance. Its refined character creates a clean, elevated material expression—ideal for luxury and statement applications where material quality and design detail take center stage.



Poplar

A lightweight yet durable hardwood, Poplar develops a rich tone when modified, with subtle grain and natural variation. Its combination of performance, lighter weight, and approachable price point makes it a versatile alternative to premium hardwoods for cladding, soffits, façades, and other architectural applications.

CLADDING PROFILES

Designed Around Your Vision

ThermalPro Wood gives architects the flexibility to develop cladding around the design intent and building envelope. Specify hardwood or softwood species, board width, thickness, reveal, orientation, profile, surface texture, and finish to create the desired rhythm, shadow lines, depth, and scale across the façade.

Choose from our most commonly specified profiles, any WWPA pattern, or develop a custom profile. Made-to-order milling also allows us to replicate historic profiles and match existing conditions for restoration and adaptive reuse projects.

Start with the architectural detail—we'll make the wood to fit it.

Tongue & Groove









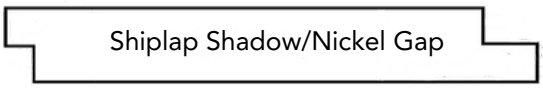
Lap





⅞ Reveal Shown, 1/2" Available:





Bevel





Nickel Gap Profile shown in thermally modified southern yellow pine, vertical installation



5 TRIM & CORNER

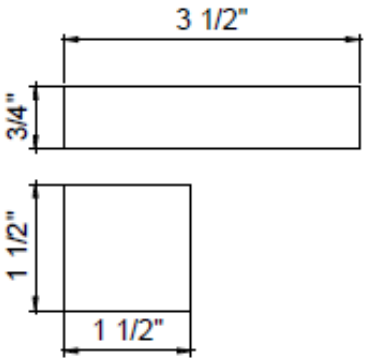
TRIM & CORNERS

Complete the Look

Create a cohesive exterior with ThermalPro Wood matching trim and corner boards, made to complement your cladding in the same species and finish. Available in a range of dimensions and made-to-order sizes, trim and corner boards provide a coordinated solution for windows, doors, transitions, outside corners, and architectural details.

Finish: Eased 4 Edges Smooth
Spec | BIM files:
marketing@spartanforest.com

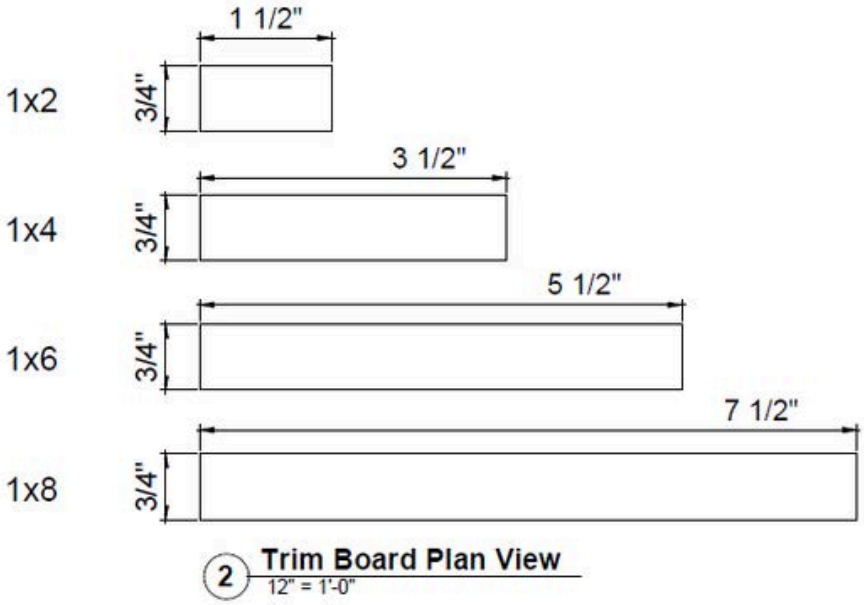
CORNER BOARDS





TRIM SIZES





2 Trim Board Plan View
12" = 1'-0"

FINISHES

Natural Beauty. Your Choice of Finish.

Every wood species responds differently to thermal modification, creating its own unique color, grain, and character. Lighter species and softwoods offer greater flexibility for staining and custom finishes, while darker species can showcase the rich tones created naturally through modification.

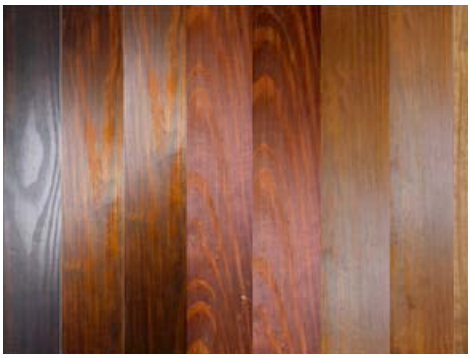
Thermally modified wood does not require a finish and can be left to weather naturally to a silver-gray patina. For greater control over the appearance, ThermalPro offers UV-protective finishes to help retain color, as well as aging treatments that promote a more even silvering process and help minimize dark or uneven weathering.

Preserve the color, customize the tone, or let it age naturally—the choice is yours.



Preserve the Natural Color

Effective UV protection requires pigment, so even our most natural-looking finishes contain color. ThermalPro offers carefully selected natural-tone stains designed to closely replicate each species' freshly modified color, helping preserve its original appearance while protecting it from UV-driven graying.



Color Without Compromise

Our chemical-free nanotechnology stains are available in a wide range of natural and architectural color tones. Especially well suited for lighter wood species, these finishes allow designers to explore greater color variation while enhancing and showcasing the wood's natural grain and character.



Controlled, Even Weathering

WoodForce helps thermally modified wood weather more evenly, minimizing the dark spots and uneven discoloration that can occur during natural aging. Choose an initial tone that mimics the wood's eventual silver-gray patina, allowing the finish to fade subtly as the wood ages, or select from a variety of other color options. WoodForce also acts as a wood protectant and stabilizer, supporting a more consistent appearance and long-term performance.

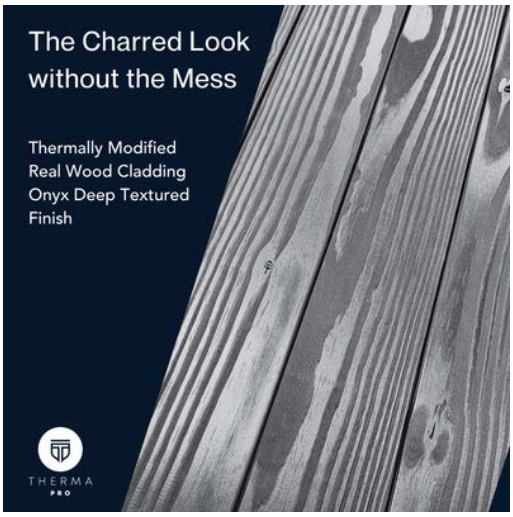
SURFACING

Texture by Design



The surface of the wood can be just as important to the design as the species or color. ThermalPro Wood offers a range of custom surfacing techniques that allow architects and designers to introduce texture, depth, and character into cladding and other architectural applications.

Custom sawing techniques can create anything from subtle mill marks to a more pronounced, rustic-sawn appearance, adding movement and handcrafted character to the surface.



Wire brushing can range from a light texture that gently emphasizes the natural grain to deep brushing that removes softer fibers and creates dramatic relief.

For a bolder architectural statement, **deep wire brushing** can produce the dimensional, charred-wood aesthetic associated with Shou Sugi Ban—without burning the wood or introducing soot. Surface textures can also be paired with natural tones, custom stains, or weathering finishes to further enhance the grain and create a truly distinctive appearance.

From refined and subtle to deeply textured and rustic, each surface can be made to order to support the design vision.



Circle Sawn Texture on thermally modified Southern Yellow Pine. Oiled finish with Walnut pigment.