



ARBOR
WOOD_{co}

THERMALLY MODIFIED WOOD





Responsibly produced thermally modified wood.

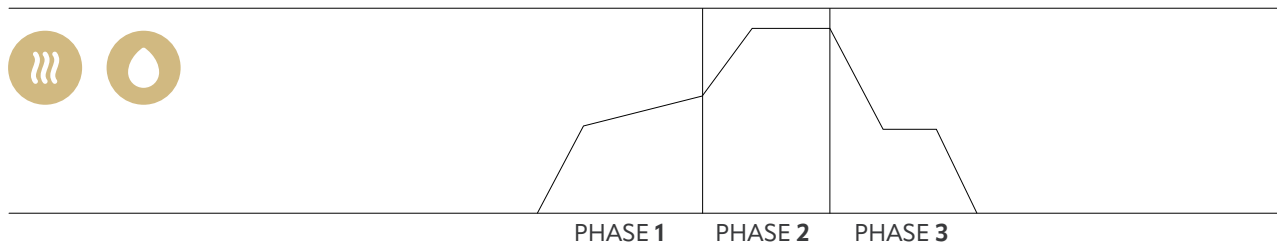
WHERE INNOVATION MEETS BEAUTY.

Arbor Wood Co. produces thermally modified wood for a variety of outdoor and indoor applications including siding, decking, trim, & millwork. Our process begins with a select grade of domestically grown and responsibly harvested timber which undergoes a thermal modification process using heat and steam. The result is a high quality, performance driven material which sustains the natural beauty and design element of wood all without the use of harsh chemicals.

Thermal modification is a unique craft which alters wood at the cellular level to create a material that is functionally and visually successful in a range of residential and commercial applications. High heat and steam replace chemicals to fundamentally modify Arbor Wood's hemicellulose, making it one of the most natural, chemical-free ways to extend the service life of a wood product. The wood is less absorbent, resulting in increased material stability with less warping/cupping and minimal expansion/contraction. Additionally, certain organic compounds are eliminated during modification thus removing the food source for rot and insects. The conversion of sugars to a nonfood source also turns the timber a darker, richer through-color, providing an appealing and refined aesthetic.

Our process begins with a select grade of domestically grown and responsibly harvested wood.

Prior to modification, our rough-sawn timber is hand selected, graded for quality, and kiln dried to a consistent moisture content. The wood then enters our modification process where high heat and steam improve the dimensional stability, durability, and visual tone of the material. Once modified, these timbers are milled into finished profiles where any undesired characteristics such as checking or end-cracking are also removed. The result is a beautiful board which is straight, true and ready for use.



PHASE 1: TEMPERATURE INCREASE

Kiln temperature is raised rapidly to reduce moisture content down to nearly zero and eliminate bound water from the hemicellulose in the wood. With this, the food sources for mold, rot, fungal decay and insects are also removed.

PHASE 2: THERMAL MODIFICATION

The second phase is where peak temperature is hit and thermal modification occurs. The hydroxyl groups within the hemicellulose are broken, thus rendering the wood resistant to water absorption. Naturally occurring sugars are converted and give the wood a slightly darker, richer appearance.

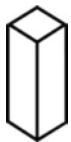
PHASE 3: COOLING & RE-CONDITIONING

Temperature is reduced and steam introduced to complete the process. The steam cools and conditions the wood to a final moisture content of 4-6% improving dimensional stability.



Lasting Beauty and Lasting Impact

The thermal modification process affects wood's relationship with water by breaking down the hydroxyl groups in the wood and eliminating the bound water, making Arbor Wood less prone to mold, rot, and fungal decay. The wood is also less likely to absorb new moisture and has a reduced equilibrium moisture content, reducing the chance of swelling and shrinking by up to 60%. The lower moisture content reduces the overall weight of the wood and helps support the general workability of Arbor Wood.



SOLID & STABLE

Dimensional stability is increased as expansion and contraction is reduced by up to 60%.



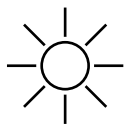
DECAY RESISTANT

Less water absorption makes it less susceptible to mold, rot & fungal decay.



ULTIMATE WORKABILITY

Arbor Wood may be glued, painted, or finished similar to standard wood to achieve the desired look for your next project.



ENHANCED APPEARANCE

Thermally modified wood will have richer tones that extend throughout the entire thickness of each board.



CHEMICAL FREE

The thermal modification process uses nothing but heat and steam.



LIGHTER WEIGHT

A significantly lower moisture content reduces the physical weight of each board for easier handling and installation.



Sustainability

Arbor Wood is a premier choice for sustainably harvested thermally modified wood. Our material can be used in place of more expensive tropical wood species and is a domestic, renewable, and environmentally conscious option.



Learn more about our Sustainability Efforts



RENEWABLE

Manufactured domestically from trees sourced and harvested in responsibly managed forests in the United States.



LONGER LASTING

Microscopic changes to the wood have macro results - longer lasting, hydrophobic, resistant to rot and decay - just to name a few.



CHEMICAL FREE

High heat and steam replace more traditional chemicals, which are otherwise so prevalent in building materials.



CARBON STORAGE

Using wood can reduce carbon emissions due to its properties as a natural carbon sink.

Associated Sustainability Organizations



Arbor Wood is a sound choice in environments typically unforgiving to wood, such as exterior decking and siding or interior flooring, or where a low-maintenance natural wood product is desired.



Products & Applications

Thermally modified wood can be used in an array of commercial and residential applications. Popular applications are in external environments where moisture and humidity would compromise a lesser-grade material.



SIDING

Arbor Wood siding is produced from domestically sourced and responsibly harvested wood. We produce a range of wood species, profile and finish options, including our take on traditional Japanese charred cladding.



DECKING

Arbor Wood decking is available in a range of species and profile options. Our modified hardwoods prove an eco-conscious alternative to exotic hardwoods, and our softwoods a more natural and durable alternative to chemically-preserved lumber.



TRIM & MILLWORK

From windows and doors to interior flooring and even landscape furnishings, Arbor Wood is available in a range of dimensional lumber profiles to allow for a higher performance natural wood alternative.

Collections

Arbor Wood is available in a variety of bold and distinct factory finishes to fit your project.

natrl

minimal, raw, refined



+ ash
+ no finish



+ red oak
+ clear oil



+ pine
+ clear oil

brnsh

burned, bold, beautiful



+ burned pine
+ black oil



+ burned & brushed pine
+ black oil



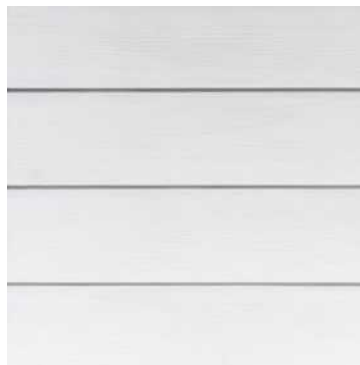
+ burned & brushed pine
+ brown oil

elmnt

expressive, earthly, exquisite



+ brushed pine
+ grey oil



+ brushed pine
+ white oil

Maintenance

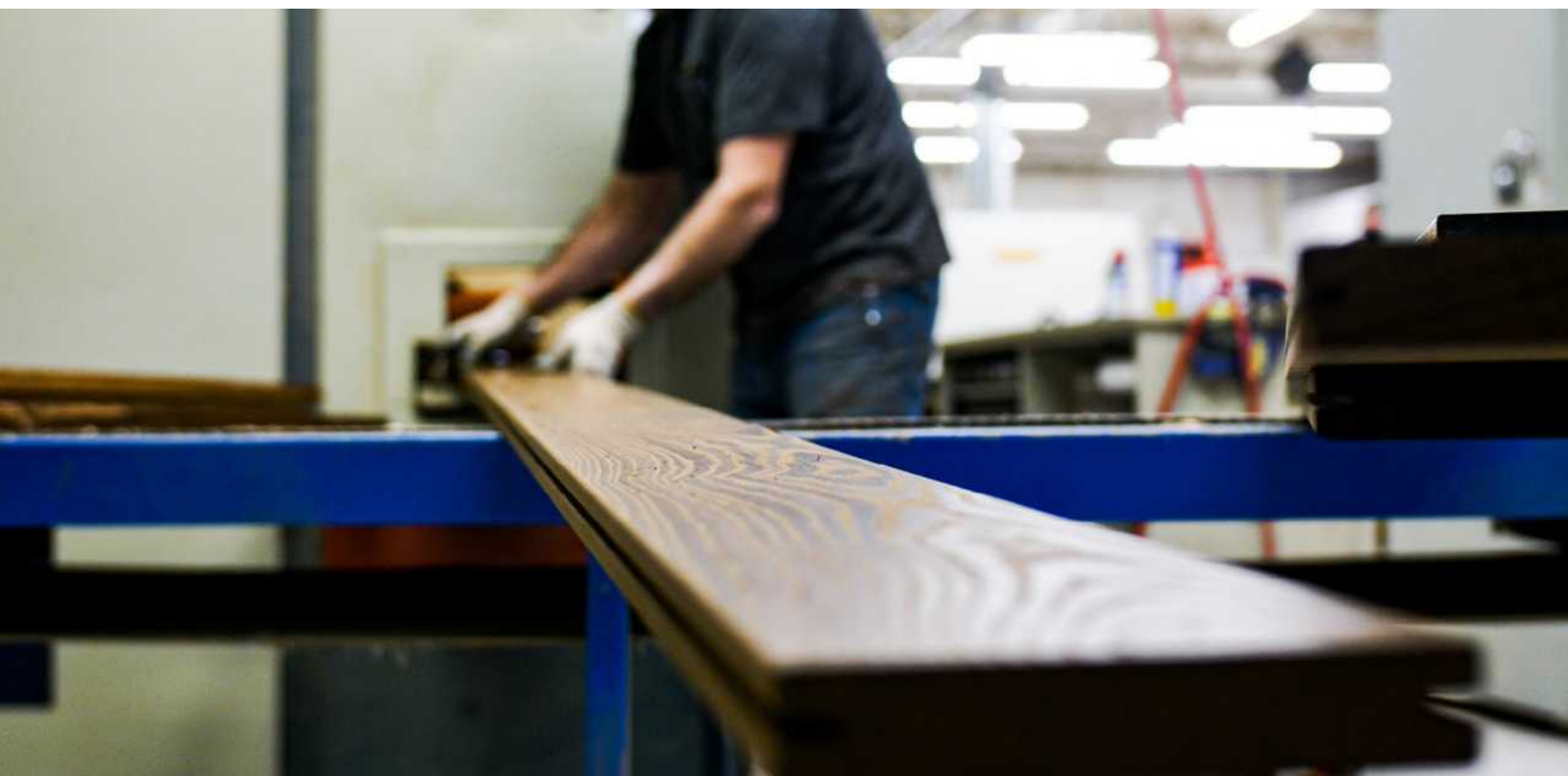


COLOR CHANGE






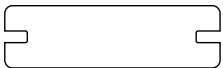


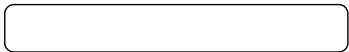


Thermal modification changes the naturally occurring sugars in the wood resulting in beautiful, rich tones that extend through the full thickness of the material. Since Arbor Wood is still a natural product, the grain and unique characteristics of the wood remain. In an exterior environment, Arbor Wood will move to gray when unfinished and the application of UV inhibitors help slow this process similar to non-modified products.

FINISHES



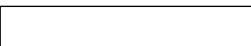








It is recommended to finish Arbor Wood with an exterior UV protective surface finish. Our products have minimal expansion/contraction properties and can be finished with standard products, such as paints and clear coats. Clients should expect slightly longer dry times because of the non-absorbing nature of the material.



Profiles & Dimensions

SIDING	Profile	Species	Dimension
	Tongue & Groove	Ash Pine Red Oak	.75" x 5"
	Tongue & Groove	Ash	.75" x 3"
	Hidden Fastener	Ash	.75" x 4.5"
DECKING	Profile	Species	Dimension
	Hidden Fastener	Ash Red Oak	1" x 5.5"
	Non-Grooved	Ash Red Oak	1" x 5.5"
	Hidden Fastener	Ash	1" x 3.5"
	Non-Grooved	Ash	1" x 3.5"
	Hidden Fastener	Ash	.75" x 5.5"
	Non-Grooved	Ash	.75" x 5.5"
	Hidden Fastener	Pine	1" x 5.25"
	Non-Grooved	Pine	1" x 5.25"

DIMENSIONAL LUMBER

DIMENSIONAL LUMBER		Species	Dimension (nominal)	Dimension (actual)
	Ash	Pine Red Oak	1" x 2"	.75" x 1.5"
	Ash	Pine Red Oak	1" x 4"	.75" x 3.5"
	Ash	Pine Red Oak	1" x 6"	.75" x 5.5"
	Ash	Pine Red Oak	1" x 8"	.75" x 7.25"
	Ash	Pine Red Oak	2" x 2"	1.5" x 1.5"
	Ash	Pine Red Oak	2" x 4"	1.5" x 3.5"
	Ash	Pine Red Oak	2" x 6"	1.5" x 5.5"
	Ash	Pine Red Oak	2" x 8"	1.5" x 7.25"
	Ash	Pine Red Oak	2" x 10"	1.5" x 9.25"
	Ash	Pine Red Oak	2" x 12"	1.5" x 11.25"
		Pine	4" x 4"	3.5" x 3.5"



Arbor Wood. **For Good.**

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**MADE IN
THE USA**