



TIMBERHP

INSULATE BETTER. LIVE BETTER.™



**Thermal and
Acoustic Insulation
for the Built
Environment**

**Safe, Affordable,
Renewable, and
Carbon Negative**

**High Performance
Solutions for Better
Buildings**



Customer
Brochure

WOOD FIBER INSULATION, MADE IN AMERICA



Wood Fiber Insulation, Made in America

For over two decades, European manufacturers have been producing a new generation of wood fiber insulation to meet the increasing demands of the construction industry abroad. Now for the first time, this high-performing product line is being manufactured in North America by TimberHP. Born from the collaboration of a Passive House architect, Matthew O'Malia, and a materials chemist, Joshua Henry; TimberHP offers comprehensive insulation solutions for wood-framed buildings that are affordable, easy and safe to install, and deliver performance attributes differentiable from all other traditional insulating options.



TimberHP Elevates Performance

TimberHP's line of blown-in, batt, and board insulations originate from softwood chips left over from lumber production. TimberFill, TimberBatt, and TimberBoard can stand alone as drop-in replacements for other above-grade insulation products; or they can work together to satisfy all cavity and continuous needs for a complete solution. Wood fiber insulation allows the creation of resilient designs to achieve industry-leading thermal and acoustic potential while supporting healthy indoor air quality and addressing our impact on the environment. TimberHP products are renewable and recyclable, free of toxins and abrasive fibers, and arrive at the jobsite carbon negative.

Insulate Better. Live Better.

TIMBER + HP = High Performance
Healthy Planet
Healthy People




 High Performance

Building envelope, thermal, and acoustic solutions

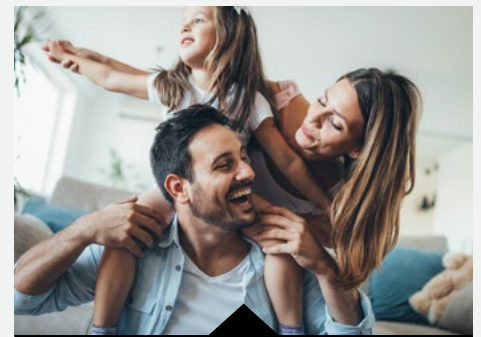
A comprehensive, above-grade product line to create wind-tight, vapor-open assemblies offering stable, long-term R-values, improved temperature stability, and premium sound protection



 Healthy Planet

Recyclable, renewable, non-toxic, and carbon negative

Made from residual wood chips to maximize the use of our renewable forest resource. As a high-value insulator with a negative carbon footprint, reduces a building's global warming potential on day one and everyday it operates



 Healthy People

Moisture managing, safe, and sound absorbing

Installers benefit from the absence of dangerous fibers that harm skin and negatively impact air quality. Leads to the creation of safe, quiet indoor habitats, free of airborne toxins and trapped humidity

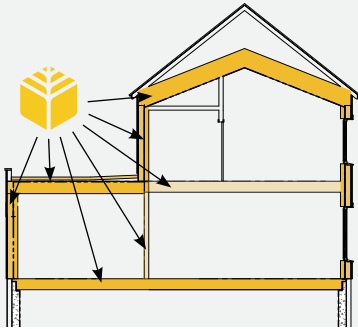
High Performance

Beyond R-Value: TimberHP Insulation delivers layers of performance



Versatile

- Easy, affordable drop-in replacement for other above-grade insulations
- Stand-alone comprehensive system: board, batt, and blown-in, together, achieve unmatched performance



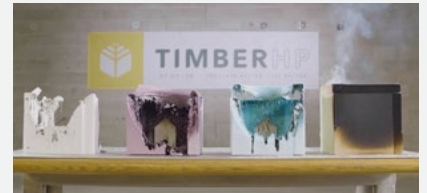
Wind Tight & Vapor Open

- Product density and composition effectively reduce air leaks and wind washing, achieving a tight assembly that remains vapor open and increases durability
- Vapor open and water repellent: with a perm rating of 40 @ 1" thickness, TimberBoard allows indoor humidity to escape through, while at the same time repelling bulk water for double protection
- Board products can hold 15% of their weight in moisture without losing insulating properties



Fire Safe

- Non-toxic flame retardant provides Class A performance (ASTM E84 Standard) for Batt and Fill
- Board products available without flame retardant offer Class B performance (ASTM E84 Standard)



Stable & Durable

- Insulation for a lifetime, will not degrade over time
- TimberBoard: high-density material reduces air leaks and prevents wind washing
- TimberBatt: rugged, easy to handle, perfect fit with strong binding fibers



Moisture Managing

- Storage: wood fiber can absorb and store (and later release) moisture, resulting in increased interior comfort
- Diffusion: spaces designed with TimberHP are protected. Moisture passes through, reducing risk of mold, rot, and allergens
- Capillarity: timber products effectively redistribute unwanted condensation or moisture build up evenly



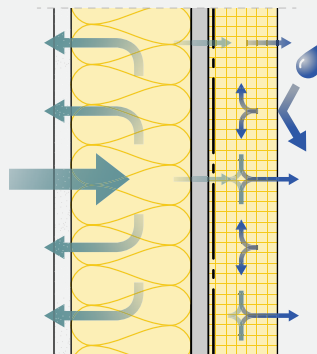
Resists Microbes

Borate additives protect wood fiber from fungi, including mold and mildew (ASTM C739)



Insulation for All Seasons

- Exceptional comfort: reduced heating and cooling loads
- Guards against winter: R-values up to R-4 per inch, excellent draft reduction
- Protects against summer heat: highest thermal capacity of any insulation, buffers and delays warming



Sound Protection

- Stand-alone and assembly solution for reducing airborne and impact noise
- 50+ STC wall with 2x4 and R/C construction maximizes floor space while minimizing sound



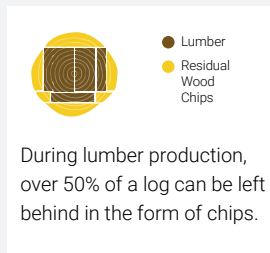
Healthy Planet

The only scalable, environmentally-responsible insulation



Made from Renewable Resources

Wood fiber insulation is made from small-diameter, low-value trees and residual wood chips that pile up at lumber mills daily. We process this leftover wood into wool-like fibers, add nontoxic adhesives and/or fire retardants, and form it into innovative, highly-efficient insulation.



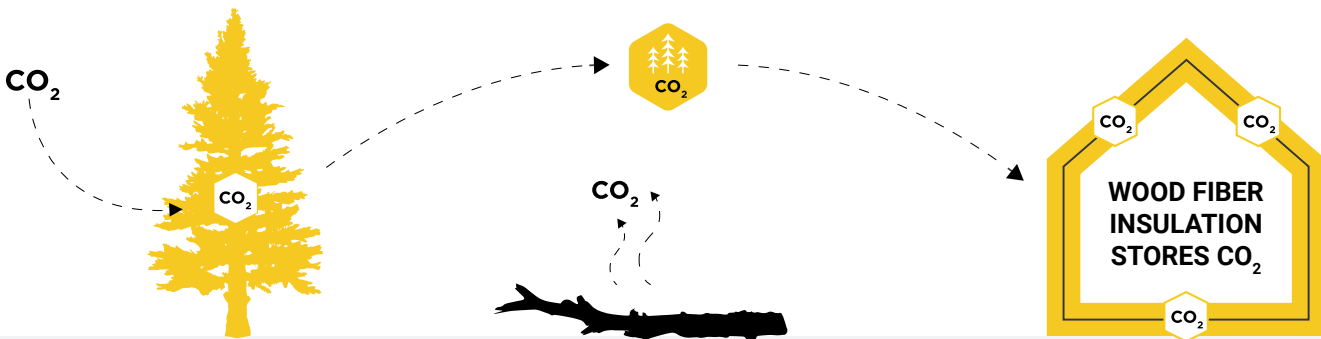
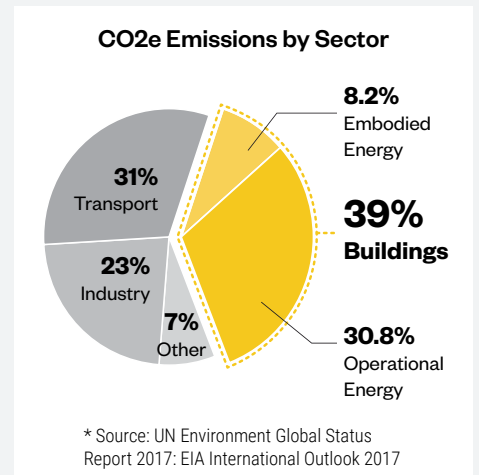
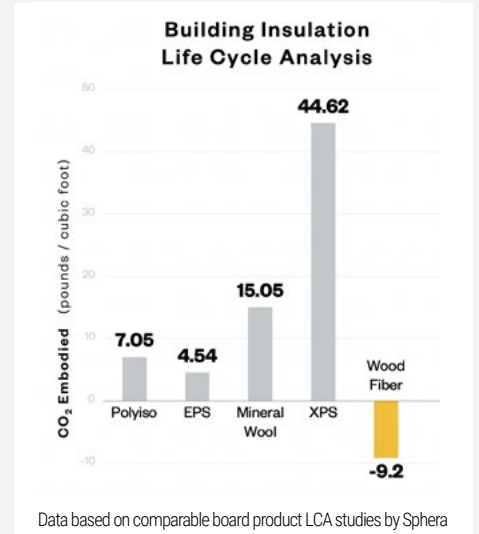
Locally Sourced and Produced

Our raw materials come to us with very little carbon burden. Transportation is minimal vs other products on the market such as glass, sand, and chemicals for foam. Unlike other insulations that are derived from fossil fuels, our products are biogenic, non toxic, and biodegradable.



Carbon Smart, Made Easy

Our cost-competitive, wood fiber insulation products are good for our customers and good for the planet. Buildings account for 39%* of all greenhouse gas emissions. Reducing and reversing the acceleration of global warming happens by making carbon smart choices. TimberHP captures and stores the CO₂ inherent in wood products which allows us to lock up carbon for the lifetime of the installation while growing more trees to sequester additional carbon. TimberHP products are carbon negative from day one, helping all of us reduce our carbon footprint.



Atmospheric carbon dioxide is taken up by trees and, through photosynthesis, is stored as carbon in biomass

At the end of a tree's life, when left to decay, this stored carbon will return to the atmosphere slowly

Using residual wood chips and low-grade softwood trees as the source material for wood fiber insulation locks in carbon for the lifetime of the building

Healthy People

Safe for builders and inhabitants alike



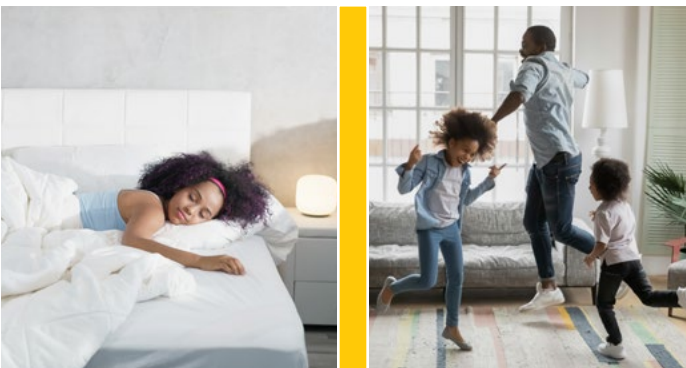
Jobsite Friendly

Made primarily from wood chips, TimberHP products are at home on the jobsite. Contractors handle and install our products without wearing gloves, long sleeves, or chemical respirators. Glass and mineral-based insulation products irritate skin and the respiratory system. Chemicals in spray foams require closed jobsites and respirators for installation. With wood fiber, jobsites remain open to all trades and no respirators are required.



Indoor Air Quality, Naturally

Wood fiber insulation yields assemblies with industry-leading, flexible moisture management. When walls and ceilings are vapor open, not only is the building protected from unwanted moisture build up, but indoor humidity can be buffered, leading to increased comfort and better air quality. Since 85% of our time is spent indoors, we tend to look closely at the chemical composition of materials used in our buildings. Better indoor air quality supports quality sleep, focus, and better health.



Industry-Leading Acoustics

Noise can adversely affect our comfort and health. TimberHP systems excel at noise reduction. The density of batt or blown-in installed effectively reduces sound transmission. TimberBoard continuous insulation further reduces sound transmission, isolating more resonant pathways through framing.



Supporting a New Forest Economy

TimberHP's advanced technology is breathing new life into the forest products industry, reinvigorating local communities. For decades paper mills have been a major economic driver across the U.S., but, with less paper needed these days, many have been forced to close their doors. TimberHP is stepping up to convert wood waste into cost-competitive, environmentally-sustainable insulation products.

Insulation Solutions for Above-Grade Applications

COMING WINTER 2023



TimberBoard

TimberBoard excels as a vapor open, continuous insulation (CI) with a stable R-value, high heat capacity, and high compressive strength. A combination of density and low conductivity protects against heat loss in the winter and provides exceptional buffering of summertime heat gain. Wood fiber continuous insulation meets all residential fire standards and offers superior fire protection vs foam-based products. Wood fiber CI prevents the trapping of unwanted moisture within assemblies and offers the compressive strength required for efficient cladding installs.

Key Attributes

- Low thermal conductivity and high heat capacity—insulation for all seasons R-3.4 to 3.7/in
- 1-9.25" thicknesses. Square-edge 2'x4'; 2'x8'; and 4'x8' sheets. Tongue and groove 2'x4' and 2'x8' sheets available in 2024
- Windproof, water-resistant, vapor-open continuous insulation solution for walls and roofs
- Durable, easy to handle, cut and install
- ASTM E84 Class B <75 Flame <450 Smoke spread without additional flame retardants

COMING FALL 2023



TimberBatt

TimberBatt is a flexible, press-fit cavity insulation composed of refined wood fiber with added binders and flame retardant. Its dense, high R-value per inch helps achieve Grade I installations. It outperforms other batt products as a safe, convenient, thermal and acoustic solution. TimberBatt can increase room comfort by buffering and managing indoor humidity as well as unwanted moisture accumulation within walls.

Key Attributes

- Low thermal conductivity and high heat capacity—insulation for all seasons R-4/in
- Sized for 16" o.c. and 24" o.c. wood and steel cavities: 3"; 3.5"; 5.5"; 6" and 7.25" thicknesses
- Manages and redistributes moisture, borates protect against mold and mildew (ASTM C739)
- Durable, easy to handle, cut and install
- ASTM E84 Class A (<25 Flame <450 Smoke spread)

COMING SUMMER 2023



TimberFill

TimberFill offers exceptional and debris-free installs contractors appreciate, using the same machines and methods familiar to all fiber applications. Attic applications resist wind washing, and full-fill wall applications eliminate convective loops. Closed cavity applications can be installed at lower densities without risk of settling, resulting in cost and time savings, as well as exceptional sound and airflow reductions.

Key Attributes

- Low thermal conductivity and high heat capacity—insulation for all seasons
- R-60 attic: ~12 sq ft per 25# bag. 2x6 Wall: R-21 20 sq ft per 25# bag
- Manages and redistributes moisture, borates protect against mold and mildew (ASTM C739)
- Easy to handle and install
- ASTM E84 Class A (<25 Flame <450 Smoke spread)



TimberHP Recycling

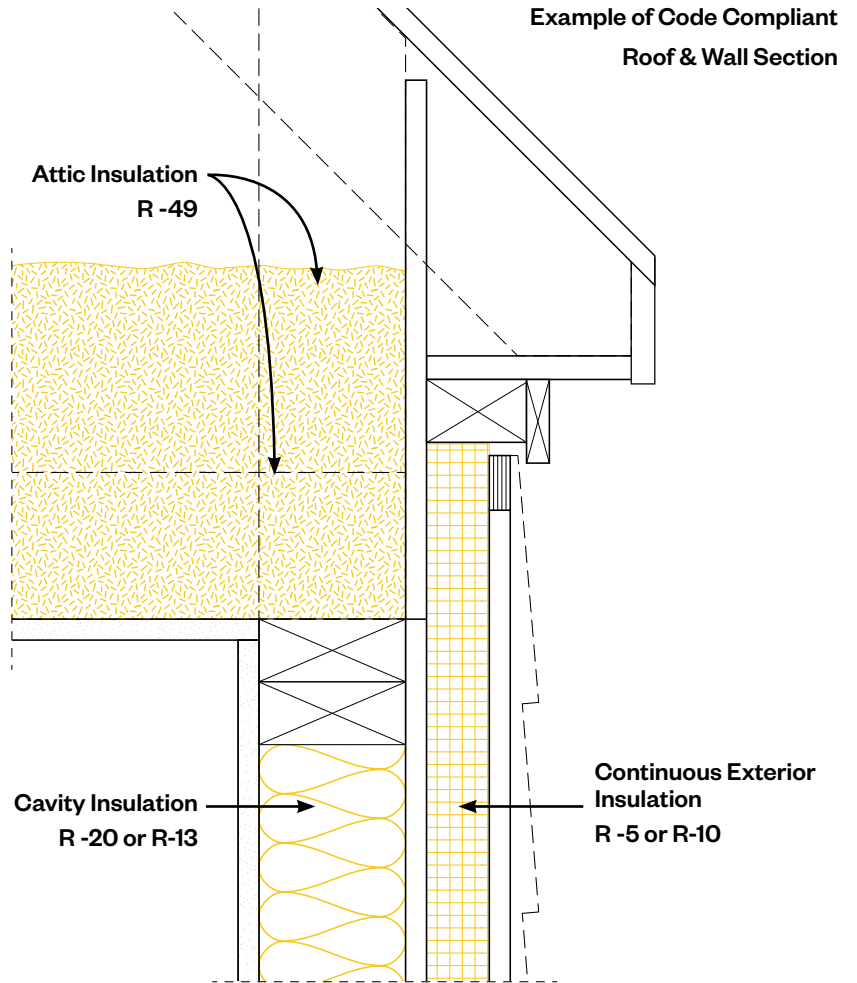
TimberHP products are fully recyclable. Scraps created during manufacturing or leftover on jobsites can be returned to the production lines to generate new TimberBoard, TimberBatt, and TimberFill.

Affordable, Environmentally-Responsible Insulation

TimberHP's wood fiber insulation costs the same or less than other products on the market, while providing many additional benefits. It's a marriage of environmental sustainability and cost competitiveness that comes at a critical time, as more stringent building codes demand that structures use less energy and leave less of a carbon impact.

Simplified Code & Performance Standards

TimberHP reduces the learning curve for achieving desired thermal and acoustic performance. Traditional, less-effective insulations can easily be traded out for vapor-open, fire-safe, wind-tight wood fiber boards, batts, or blown-in. Or by incorporating all three product lines into our homes and buildings, we can develop comprehensive systems with unmatched resilience that exceed code standards.



CLIMATE ZONE MAP

INTERNATIONAL RESIDENTIAL CODE

2018 TABLE N1102.1.2 (R402.1.2)
INSULATION REQUIREMENTS BY COMPONENT^a

Climate Zone	Wood Framed Wall (R-Value)	Ceiling R-Value
1	13	30
2	13	38
3	20 or 13 + 5 ^h	38
4 except Marine	20 or 13 + 5 ^h	49
5 and Marine 4	20 or 13 + 5 ^h	49
6	20 + 5 or 13 + 10 ^h	49
7&8	20 + 5 or 13 + 10 ^h	49

a. R-values are minimums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.

h. The first value is cavity insulation, the second value is continuous insulation, so "13+5" means R-13 cavity insulation plus R-5 continuous insulation.



Introducing TimberHP: Wood fiber insulation made in America.

A TimberFill

Loose fill and dense pack insulation for attics and stud cavities

B TimberBatt

Wall cavities, rafters, attics, and interior partitions

C TimberBoard

Continuous insulation to reduce thermal bridging and sound transfer



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