

MettleWood™

An extremely strong and tough material that is stronger, lighter, and cheaper than high-performance alloys composed of steel, aluminum, and titanium. It also offers numerous safety benefits over alternatives, and it is responsibly created and biodegradable.



Performance

Tensile Strength (MPa)	850~950
Density (g/cm³)	1.2~1.4
Specific Tensile Strength (MPa·cm³·g⁻¹)	450
Compressive Strength (MPa)	200
Stiffness (GPa)	50~55
Scratch Hardness (GPa)	0.6
Impact Toughness (J/cm²)	10~15
Hardness Modulus (lbs/in)	~10,000
Flexural Strength (MPa)	350

Other Properties

Moisture Resistance	Strong inherent resistance with additional protection available
Odor	Odorless
Thickness	10µm~15mm
Flammability	Inherently fire-retardant with additional protection available



Strong & Tough

Amazing mechanical performance. It can even stop a speeding bullet!



Outstanding Performance

Superior resistance to moisture, fire, and termites.



Customizable & Cost-Efficient

Can be inexpensively created to meet your specific needs.



Natural & Sustainable

Responsibly-grown, biodegradable, and recyclable.

For More Information

To learn about how InventWood materials can benefit you, please contact us.

Email: info@inventwood.com
www.inventwood.com

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Transparent Wood

A clear wood material that is lighter and tougher than glass, with up to 3x better thermal insulation. It also offers benefits in terms of both light channeling/guiding (reduced glare, better light distribution) and environmental sustainability.



Performance

Transmittance	~92%
Haze	Tunable
Permitted Wavelength Range (nm)	200~1,100
Reflectance	7%~8%
Thermal Conductivity (W/m·K)	0.14
Tensile Strength (MPa)	50
Thickness (mm)	1~10
Toughness (J/cm²)	1.1~1.3

Other Properties

Moisture Resistance	Strong inherent resistance with additional protection available
Odor	Odorless
Appearance	Available in clear, colored, and wood-texture varieties
UV Stability	UV stable



Transparency w/o Compromise

No glare, and can guide and distribute light evenly.



Stronger, Tougher, Safer

Unlike glass, it can bear weight loads and does not shatter.



Amazingly Insulative

3X more insulating than glass, it saves energy and money.



Natural & Sustainable

Responsibly-grown, biodegradable, and recyclable.

For More Information

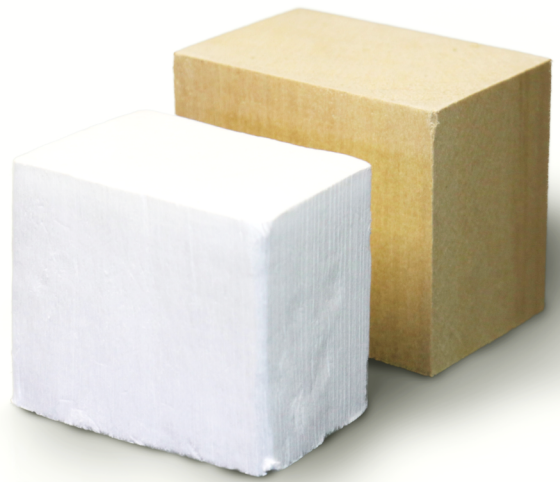
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Insulating Wood

A bright-white material that is stronger than natural wood and insulates against both heat loss and impacts better than commercially available alternatives. It is also biodegradable and eco-friendly.



Performance Specifications

Density (g/cm³)	0.13~1.2
Thermal Conductivity (W/m·K)	0.03
Air Permeability	Tunable
Whiteness/ Reflectance	Up to 99%
Wavelength Range (nm)	200~1,100
Compressive Strength (MPa)	12~14
Specific Tensile Strength (MPa/g·cm³)	Up to 400
Thermal Stability	Stable up to 300°C

Other Properties

Moisture Resistance	Inherently hydrophilic with optional water resistant treatment available
Odor	Odorless
Dyeability	Dyeable, available in all colors
UV Stability	UV stable



Extraordinarily Insulative

Lower thermal conductivity than many alternatives, better insulation.



Amazing Protection

Insulates against strong impacts, protecting what matters.



Customizable & Cost-Efficient

Can be inexpensively created to meet your specific needs.



Natural & Sustainable

Responsibly-grown, biodegradable, and recyclable.

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