

# Cambia

*wood. made better.*

The Cambia thermal modification process - a clean and energy efficient technology - uses high heat in a controlled atmosphere to improve both the dimensional stability and the decay resistance of wood by permanently altering its chemical and physical properties.

100% FSC certified, this non-toxic product provides a uniform coloration and could well be the first truly green lumber resource that performs better and costs less than alternative products developed to replace wood.



 **BRITTON  
TIMBERS**  
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[www.brittontimbers.com.au](http://www.brittontimbers.com.au)

## Introducing Cambia

*The modern, versatile alternative* – Cambia is a great looking product that is changing the way we think about where and how to use wood.

Cambia has applied its ground-breaking thermal modification process to popular American Ash, Oak, Maple and Poplar, creating an all-purpose, all weather product without peer. By reducing the ability of wood to absorb moisture, Cambia has produced a dimensionally stable, decay resistant timber.

It is particularly suited to humid conditions where it is less prone to movement than traditional timbers. Applied finishes last longer on Cambia and maintenance is also reduced.

Because it sequesters the carbon in wood, Cambia products have a rich, brown colour perfectly suited to modern domestic and commercial applications.

Cambia's thermal modification process also removes the nutrients in wood that can provide a food source for insects and wood-destroying fungi. As a result, Cambia products do not contain any toxic chemicals.

## Where to Use Cambia

Cambia is by its very nature, an extremely versatile product. It is used for decking, cladding, flooring and general joinery, including doors and windows and is increasingly being used for outdoor furniture and spa/pool areas.

Cambia's special qualities can be used almost anywhere your imagination leads you.

## Environmentally Friendly

Cambia is a 100% FSC-certified, non-toxic, naturally decay resistant alternative to imported hardwoods.

## Cambia from Britton Timbers

Britton Timbers International (BTI) is one of the largest importers of American hardwoods into Australia and is the exclusive supplier of Cambia thermally modified hardwoods. Please contact us to request a sample or to place an order.





## Technical Properties

**Colour** – Colour is determined by treatment time and temperature, and may vary from light brown to a deep roasted brown.

**Dimensional Stability** – Thermal modification significantly reduces the ability of the wood to absorb water. This limits the amount of swelling or shrinking associated with non-thermally modified kiln-dried wood.

**Density** – Thermally modified wood has a slightly lower density than non-thermally modified kiln-dried wood. This is mainly due to the removal of sugars and other non-essential organic compounds during the treatment process.

**Permeability** – 20-30% lower in permeability than that of normal kiln-dried samples.

**Thermal Conductivity** – 20-25% lower compared to untreated wood.

**Resistance to Insect Attack** – With no food source for wood-destroying insects, insects may bore into a piece of thermally modified wood, but will not infest the piece.

**Fire Resistance** – Thermal modification does not significantly alter resistance to fire.

**Biological Durability** – Thermally modified wood demonstrates a remarkable ability to resist decay by brown rot. Test results indicate that thermally modified wood should not be used in ground contact applications where structural performance is required.

**Weather Resistance** – Thermally modified wood will change colour over a period of time from the original brown to a greyish weathered colour and may also develop light surface checking when exposed to direct sunlight. The original colour and surface integrity may be preserved with pigmented or UV-protective non-toxic coatings.

**Leachate** – Thermally modified wood is not subject to chemical leaching issues.

**Surface Hardness** – Thermal modification does not significantly change the surface hardness of wood of the same species.

**Bending Strength** – Thermally modified wood has a slightly reduced modulus of rupture, though no significant reduction in modulus of elasticity when compared to kiln-dried wood of the same species.

**Compression Strength** – The thermal modification process has no significant effect on the compression strength values.

**Splitting Strength** – The thermal modification process can cause some reduction in the splitting strength.

**Screw Extraction** – The thermal modification process has no significant effect on screw extraction resistance.

## CAMBIA ASH

*Franxinus Americana*



Density (kg/m3 dry)	675	Hardness (Janka) (kN)	6	Resistance to Split in Nailing	Fair
Specific Gravity	0.6	Finish	Excellent	Resistance to Split in Screwing	Fair
Modulus of Rupture (MPa dry)	104	Stability	Excellent	Gluing	Good
Modulus of Elasticity (GPa dry)	12	Durable	Yes	Growing Region	North America
Radial Shrinkage %	4	Sapwood Lyctid Susceptible	No	Availability	Widely
Tangential Shrinkage %	7	Machining	Good		

## CAMBIA MAPLE

*Acer Rubrum*



Density (kg/m3 dry)	705	Hardness (Janka) (kN)	6.5	Resistance to Split in Nailing	Good
Specific Gravity	0.63	Finish	Excellent	Resistance to Split in Screwing	Good
Modulus of Rupture (MPa dry)	109	Stability	Excellent	Gluing	Good
Modulus of Elasticity (GPa dry)	13	Durable	Yes	Growing Region	North America
Radial Shrinkage %	3	Sapwood Lyctid Susceptible	No	Availability	Widely
Tangential Shrinkage %	6	Machining	Good		

## CAMBIA OAK

*Quercus Rubra*



Density (kg/m3 dry)	705	Hardness (Janka) (kN)	6	Resistance to Split in Nailing	Fair
Specific Gravity	0.64	Finish	Excellent	Resistance to Split in Screwing	Fair
Modulus of Rupture (MPa dry)	99	Stability	Excellent	Gluing	Good
Modulus of Elasticity (GPa dry)	12	Durable	Yes	Growing Region	North America
Radial Shrinkage %	3	Sapwood Lyctid Susceptible	No	Availability	Available
Tangential Shrinkage %	5	Machining	Good		

## CAMBIA POPLAR

*Liriodendron Tulipifera*



Density (kg/m3 dry)	449	Hardness (Janka) (kN)	2.5	Resistance to Split in Nailing	Good
Specific Gravity	0.42	Finish	Good	Resistance to Split in Screwing	Good
Modulus of Rupture (MPa dry)	69	Stability	Excellent	Gluing	Poor
Modulus of Elasticity (GPa dry)	11	Durable	Yes	Growing Region	North America
Radial Shrinkage %	2.5	Sapwood Lyctid Susceptible	No	Availability	Widely
Tangential Shrinkage %	6	Machining	Good		