



Technical Specifications

Product: Crafted Hardwood

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Table of Contents

1.	<i>Product Description:</i>	3
2.	<i>Product Features:</i>	3
3.	<i>Technical Specifications:</i>	3
4.	<i>Manufacturing Process:</i>	3
5.	<i>Environmental Impact:</i>	4
6.	<i>Quality Assurance:</i>	4
7.	<i>Certifications:</i>	4
8.	<i>Safety and Health:</i>	4
9.	<i>Packaging and Delivery:</i>	4
10.	<i>Warranty:</i>	4
11.	<i>Summation:</i>	4
12.	<i>Technical Guide:</i>	5
13.	<i>Application Guide:</i>	5

1. Product Description

3RT Wood, derived from low-value, juvenile pulp grade logs, represent a remarkable achievement in sustainable innovation. Sourced exclusively from FSC or PEFC certified supply lines, these young, approximately 12-20 years old, pulp-grade timbers undergo an ingenious biomimicking process. This process imbues the resulting hardwood timber blocks with the aesthetics, tactile qualities, and inherent properties reminiscent of century-old trees, presenting a harmonious blend of eco-responsibility and timeless appeal.

2. Product Features

- **Sustainable Sourcing:** Exclusive use of FSC or PEFC certified supply lines ensures responsible resource management and supports ethical forestry practices.
- **Innovative Biomimicking:** Juvenile plantation timbers, typically 12-20 years old, are transformed through advanced engineering to emulate the attributes of natural hardwoods aged up to 100 years.
- **Distinctive Appearance:** The veneered blocks embody the captivating grain patterns, texture, and character synonymous with mature hardwood trees.
- **Versatile Applications:** Suitable for a wide range of interior and architectural applications, from furniture to decorative surfaces.
- **Enhanced Resource Utilization:** Transforms low-value pulp logs into valuable, high-quality hardwood timber, reducing waste and promoting sustainable utilization.

3. Technical Specifications

- **Timber Source:** Low-value juvenile timbers (FSC or PEFC certified).
- **Timber Age:** Approximately 12-20 years.
- **Block Dimensions:** 2500mm (L) x 500mm (H) x 250mm (W) +/- 10mm.
- **Biomimicking Process:** Advanced engineering replicates the attributes of century-old trees.
- **Finishing Compatibility:** Compatible with traditional hardwood finishing methods.

4. Manufacturing Process

- a. **Timber Selection:** Only juvenile timbers from certified sources are carefully chosen for transformation.
- b. **Biomimicking Transformation:** The advanced engineering process meticulously replicates the growth and aging characteristics of century-old hardwood trees, resulting in distinctive aesthetics and properties.
- c. **Veneer Assembly:** Processed juvenile timber is transformed into veneers, which are carefully assembled and bonded into blocks.
- d. **Moisture Control:** Blocks are conditioned to maintain an ideal moisture content, contributing to stability and longevity.
- e. **Finishing Application:** Blocks are prepared for finishing using traditional hardwood methods to enhance their appearance and durability.

5. Environmental Impact

- Exclusive use of certified sustainable forestry practices and conservation efforts.
- Transformation of low-value pulp logs minimizes waste and promotes efficient resource utilization.
- Reduced demand for mature trees helps preserve natural ecosystems.

6. Quality Assurance

- Rigorous quality control procedures ensure that bio-mimicked attributes are consistently replicated in the final product.
- Random sampling and testing are conducted to verify structural integrity and dimensional accuracy.

7. Certifications

- The product proudly adheres to FSC and PEFC certification standards, reflecting its commitment to sustainable sourcing and responsible production.

8. Safety and Health

- The biomimicking process and subsequent product are safe for both production workers and end-users.

9. Packaging and Delivery

- Blocks are packaged securely to prevent damage during shipping.
- Guidelines for handling and storage are provided to ensure product integrity upon delivery.

10. Warranty

- The Timber veneered blocks are covered by a 25-year above ground use limited warranty against manufacturing defects.

11. Summation

The Blackbutt Timber Veneered Blocks sourced from low-value, juvenile plantation timbers, and artfully transformed through biomimicking, encapsulate the ethos of sustainability and innovation. By emulating the characteristics of century-old hardwood trees, these blocks epitomize the perfect synergy between eco-conscious practices and timeless design. With their compatibility with traditional finishing methods, these blocks open doors to creativity in diverse interior and architectural applications, reflecting a commitment to both environmental stewardship and enduring quality.

For inquiries or further information, please contact:

Crafted Hardwoods
Ph: 1300 320 610
Email: info@craftedhardwoods.com
Web: www.craftedhardwoods.com

12. Technical Guide

Species	3RT Blackbutt	3RT White Gum	3RT Tasmanian Oak
Density	950kg/m ³	800kg/m ³	770kg/m ³
Modulus of Elasticity (MOE)*	20,680 MPa	16,400 MPa	16,030 MPa
Bending Strength (f _b) (MOR)*	97 MPa	60 MPa	65 MPa
Tension Strength (f _t)*	98 MPa	—	—
Shear Strength (f _s)	5.1 MPa	5.1 MPa	—
Compression Strength (f _c)*	68 MPa	66 MPa	—
Modulus of Rigidity (G)	1230 MPa	—	—
Bearing strength perpendicular to grain (f _p)*	12.6 MPa	—	—
Janka hardness	7.6	5.7	4.4
Stress Group	F27	F17	F22
Strength Group	SD6	—	—
Fire Group Number (AS/NZS 3837)	3	3	3
Average Critical Heat Flux (kW/m ²) (AS/ISO 9239.1)	4.8	3.8	—
Char Rate (mm/min)	0.69	0.84	—

*Characteristic values for design

Note: This information has been prepared by 3RT as a guide to assist with the specification of 3RT wood solid products and should not be used as the sole means of research.

13. Application Guide

	3RT Blackbutt*	3RT White Gum	3RT White Gum (H3 treated)*	3RT Tasmanian Oak
Cladding/Screening	✓		✓	
Panelling	✓	✓	✓	✓
Decorative panels	✓	✓	✓	✓
Furniture	✓	✓	✓	✓
Stairways	✓	✓	✓	✓
Posts and Beams	✓	✓	✓	✓
Doors and windows	✓	✓	✓	✓
Flooring	✓	✓		✓

*Suitable for above ground outdoor use

Disclaimer: The information provided in this document is subject to change without notice. The specifications and features described herein are accurate as of the document's date of publication.