

Innowood Australia Pty Ltd

126 O'Connell Street, North Parramatta NSW 2151

T + 61 (02) 9630 8388

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www.innowood.com



INNOWOOD Physical Properties

Physical Property	Attribute	Standard / Report	Notes
STRENGTH, MOISTURE and TEMPERATURE RELATED			
Modulus of Rupture (MoR)	30.78 - 32.2 MPa (N/mm ²)	AS/NZS 4266.5:2004	Ultimate strength at failure
Modulus of Elasticity (MoE)	1.527 - 2.102 GPa (103N/mm ²)	AS/NZS 4266.5:2004	Proof elastic limit
Internal Bond Strength	1.36 MPa =N/mm ²	AS/NZS 4266.6:2004	Internal bond strength normal to the face of the sample
Specific Density	0.825 – 0.830 kg/m ³	AS/NZS 4266.4:2004	At equilibrium moisture content: (EMC) - 23°C & 50% RH
Moisture Content	1.31%	AS/NZS 4266.3:2004	At equilibrium moisture content: (EMC) - 23°C & 50% RH
Moisture Absorption	0.54 % Mass Change	AS/NZS 4266.14:2004	Moisture absorption mass change is reversible. Mass change of material at 25°C & 85% RH / ~216 hrs.
Moisture Movement	$\delta = 4.4 \times 10^{-6}$ mm/mm/% R.H. Extrapolated Average	AS/NZS 4266.14:2004	Moisture movement is reversible. Final length calculated as follows: $L_f = L_i (1 + \Delta\delta \text{ R.H.})$
Surface Water Absorption	1.0435 g/m ² /hr Extrapolated Average	AS/NZS 4266.12:2003	Observed capillary moisture absorption similar.
Thermal Coefficient of Linear Expansion (α).	$A = \sim 6.0 \times 10^{-5}$ mm/mm/°C Estimated Average	REF AS 4459.8	Thermal linear movement is reversible
Impact Resistance	Mean failure height: 1330mm	ASTM D4495-12	Specimen thickness: 28.0mm Mass of the falling weight: 5Kg Diameter of the falling weight: 63.5mm
	Mean failure energy: 59J		
Static Coefficients of friction	0.57	ASTM D2394-05 (2011) Section 33~37	Specimen: 625*145*28.10mm, Testing Speed: 1.27mm/min
Sliding Coefficients of friction	0.36		Specimen: 625*145*28.10mm, Testing Speed: 51mm/min
Abrasion Resistance	Weight loss: 108mg	ASTM D4060-10	Wheel: CS-10, Load: 1000g/wheel (total 2000g), Cycles: 1000
<p>INNOWOOD is an extruded product and the grain direction of the waste-wood fibres and the polymers are typically along the direction of the product profile. The characteristic flexural strength attributes are tested along the length of the product profiles.</p>			

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FIRE RELATED			
Fire Hazard Property	Group 1 (By Request)	AS/NZS 3837 Specification A2.4 of BCA	Performance Composition Average Specific Extinction Area: 231.0 m ² /kg, Specification C1.10 section 4(c) of the BCA. <u>Specified Formulation</u>
Bushfire Attack Level (BAL rating)	Up to BAL-29 (By Request)	AS3959:2009 Construction of Buildings in Bushfire Prone Areas. Appendix F.	Performance Composition that has met the requirements for bushfire-resisting timber and is deemed to be acceptable to withstand exposure up to BAL-29. <u>Specified Formulation</u>
Early Fire Hazard Indices <ul style="list-style-type: none"> • Ignitability Index • Spread of Flame Index • Heat Evolved Index • Smoke Developed Index 	11[0 – 20] 0 [0 – 10] 0 [0 – 10] 6 [0 – 10]	AS/NZS 1530.3 CSIRO Report FNE11482	Standard Composition Self-extinguishing with no support for spread of flame or further combustion. Suitable for all BCA building classifications – 1, 2, 3, 5, 6, 8 or 9b.
DURABILITY RELATED			
UV Resistant Coating	UV Stable	ISO 105-A02 AWTA Report 7-5600004-NV	Continuous cyclic QUV test – 1000 hrs UV stable under normal environmental conditions Gloss Loss Nil - Colour change 4
Salt Water Emersion	No adverse effects	CSIRO-CMMT Report No. 228/R2	Suitable for marine intertidal zones and salt spray environments
High Humidity Environment	No adverse effects	CSIRO-CMMT Report No. 228/R2	Suitable for high humidity environments
Termite Resistance	Deemed termite resistant	CSIRO-FFP Report No; 996	Suitable for outside above-ground applications

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ENVIRONMENT RELATED			
Volatile compound emissions	Deemed very low	CETC Report No; CV090305	Suitable for use in indoor environments
MISCELLANEOUS PROPERTIES			
Wet Slip Resistance	Class P5	AS/NZS 4586: 2013	Wet Pendulum Slip Resistance
Fastener Pull Out	91.85 N	AS 1649	Ring-shank nails and screws have an enhanced pull out force