

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	825 - 830 kg/m ³	AS/NZS 4266.4:2004	At equilibrium moisture content (EMC) - 230C & 50% RH
Moisture Content	1.31%	AS/NZS 4266.3:2004	At equilibrium moisture content (EMC) - 230C & 50% RH
Moisture Absorption At High Humidity	0.54 % Mass Change	CSIRO CMMT Report No: 2880/R2	Moisture absorption mass change is reversible. Mass change of material at 25 0C & 85% RH / ~216 hrs.
Moisture Movement	$\delta = 4.4 \times 10^{-6}$ mm/mm/% R.H. Extrapolated Average	CSIRO CMMT Report No: 2880/R2	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).	$\alpha = \sim 6.0 \times 10^{-5}$ mm/mm/0C Estimated Average	REF AS 4459.8	Thermal linear movement is reversible
<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>			

This publication is intended as an aid for architects, engineers, specifiers and professionals involved in the design and specification of Innowood products.
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FIRE RELATED			
Fire Hazard Property	Group 3	AS/NZS 3837	Fire retardant qualities - non combustible - self extinguishing
Early Fire Hazard Indices <ul style="list-style-type: none"> • Ignitability Index • Spread of Flame Index • Heat Evolved Index • Smoke Developed Index 	13 [0 – 20] 0 [0 – 10] 3 [0 – 10] 7 [0 – 10]	AS1530.3 AWTA Report 7-560300-CN	Fire retardant qualities Non combustible - self extinguishing 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 W	AS/NZS 4586	Slip resistant coating
Fastener Pull Out	91.85 N	AS 1649	Ring-shank nails and screws have an enhanced pull out force

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