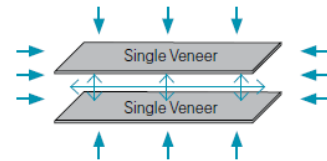


Fact Sheet 14

NiuBarrier is a softwood faced structural panel which is specifically designed as reflective noise barrier along freeway and rail corridors. Manufactured to AS/NZS2269, NiuBarrier is a high-quality structural panel with reliable structural properties in a range of panel lengths to suit the most demanding applications.

Manufactured from 100% sustainable plantation pine NiuBarrier utilizes the veneer preservation treatment method to ensure complete protection from termites and fungal decay (rotting). Veneer treatment is the only way to ensure any unsealed cut panels will not decay.

Veneer treatment method is where the individual sheets of veneer are preservative treated before being fabricated into plywood to ensure 100% penetration. The treated veneers are then bonded with a permanent phenolic resin which is often referred to as “A” bond or Marine “A” or Structural bond.



Structural “A” bonds require rigorous testing after submersion in boiling water for 72 hours or 6 hours under high pressure steam to ensure a high-quality bond.

Features and Benefits

- Renewable 100% Plantation pine manufactured using hydro-electric power
- Low embodied energy
- Manufactured to stress grade F14
- Preservative treated to H4 by Veneer treatment
- Manufactured with “A-Bond” Phenolic adhesive.

NiuBarrier Specification	
Surface Finish	Reeded (Slim Line Grooves). Must be coated by installer prior to installation or on site with a suitable Acrylic paint system e.g Dulux Weathershield, (or equivalent) in accordance with manufacturers recommendations.
Sheet Length	2400mm, 2700mm, 3000mm
Sheet width / cover	1200mm
Sheet Thickness	27, 33mm in 2400mm long panels; 31mm in jointed 2700mm and 3000mm long panels
Face Back grade	BB (unfilled) or CC (unfilled)
Veneer Species	Hoop, Klinkii, or Caribbean Plantation pine
Stress Grade	F14
Approximate density	600 kg/m ³ ; <ul style="list-style-type: none"> • 16.2 kg/m² for 27mm; • 18.6 Kg/m² for 31mm; • 19.8 kg/m² for 33mm
Jointing System	Polypropylene tongue
Preservative treatment	ACQ H4 by individual veneer (water repellent option available on request)
Bond type	“A” Bond in accordance with AS/NZS 2098.2
EWPA Certificate	Product Certification and PEFC Chain of Custody
Design Life	<ul style="list-style-type: none"> ○ 40-year bond as per guidance in AS/NZS 2754 ○ 50-year treatment warranty Panels must be coated (and maintained) with a minimum 3 coats of Acrylic paint to paint manufacturers specifications, or equivalent.

Fact Sheet 14

Manufacturing standards	AS/NZS 2269-2012 (unfilled defect) AS/NZS 1604.3-2012
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Structural Attribute	Panel Thickness (mm)		
	27	31	33
Construction Code as per AS/NZS2269	27-30-9	30-30-9	33-30-11
Moment of Inertia (I_{par}) mm ⁴ /mm	1110	1499	1940
Moment of Inertia (I_{perp}) mm ⁴ /mm	580	836	1150
Section Modulus (Z_{par}) mm ³ /mm	81	98	115
Section Modulus (Z_{perp}) mm ³ /mm	52.5	66	81
Modulus of Elasticity - E_{par} & E_{perp} Mpa	12000	12000	12000
¹ Characteristic Strength Bending - f^b_{par} & f^b_{perp} Mpa	36	28.8	36
Characteristic Strength Tension - f^t_{par} & f^t_{perp} Mpa	22	22	22
Characteristic Strength Panel Shear ($f^s_{par/perp}$) Mpa	4.8	4.8	4.8

¹ Scarf joint bending strength factor 0.8

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