



Plymasters



CD Structural Pine Ply

plymasters.co.nz

CD Structural Pine Ply

A superior CD grade with no open face knotholes and no more than eight wood patches with limited synthetic repairs on the face.

Certified to AS/NZS 2269 it gives you the assurance that it also has structural integrity, tested to the harsh New Zealand and Australian conditions.

A reasonably clean face veneer with any defects filled and finished with 150 grit sanding the face veneer and 100 on the back veneer.

Applications

- Wall linings & Ceiling linings
- Plywood box beams or signage
- Under roof decking
- Soffit linings
- General industrial applications
- Furniture
- Flooring
- Bracing
- Mobile homes
- Boat industry fittings
- Exterior Cladding
- Concrete formwork to a F3 Standard NZS 3114-1987

CD Structural Pine Ply Tech. Info

Species	100% Radiata Pine
Certifications	PEFC, AS/NZS 2269
F-Rating	Parallel F8, Perpendicular F8
Surface	Face sanding 150 grit, Thickness Calibration
Bonding	WBP A Bond Resin, Guaranteed Glue line, Ultrasound tested for Blows
Emission	AS/NZS 2098.11 Eo, JIS Super Eo LFE
Repairs	Filler / Putty, Wooden Boat Patch, Synthetic Patch
Acceptable Defects	Minor Open Defects, Tight knots up to 25mm
Origin	Chile. NZ made on request

Technical Information

Species

All CD Structural Pine Ply is produced using 100% Radiata Pine Veneers from sustainable plantations resources managed in Chile.

Moisture Content

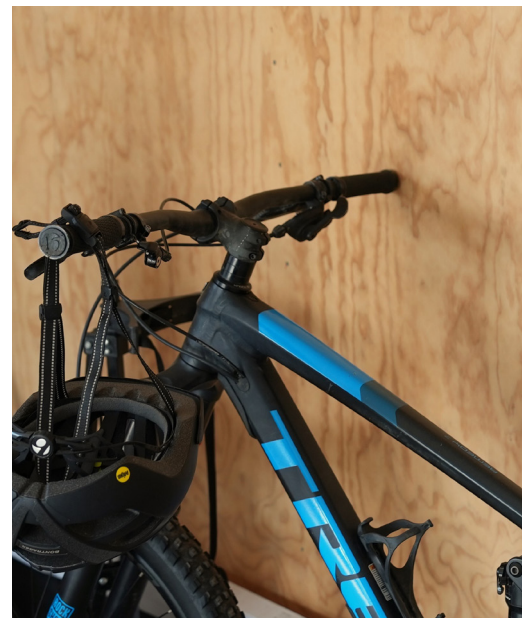
CD Structural Pine Ply has an average moisture content between 8 and 9% when manufactured. It should be protected from wet conditions throughout delivery, storage on site and in construction applications such as roofs, walls and floors. For more information refer to storage and handling.

Adhesives & Emissions

CD Structural Pine Ply is certified using an Exterior Phenol-Formaldehyde resin, emission class Eo in accordance with standard AS/NZS 2098.11 - "Determination of Formaldehyde Emissions". CD Structural Pine Ply also complies with other international low formaldehyde emission (LFE) requirements like Japanese Standard JAS Super-Eo.

Formaldehyde Emissions			
		mg/L	ppm
CD Structural Pine Ply	Typical Emission	0.03 avg*	-
AS/NZS 2098.11	Emission Class Eo	0.50 max.	Abt 0.041 max.
Natural Emission	Oak Tree	-	0.009
	Pork	-	0.020
	Shell Fish	-	0.100

While the Formaldehyde Emission limit in AS/NZS 2098. 11 is max 05mg/L for Eo, The CD Structural Ply's emissions are typically below 0.03mg/L.



Specifications

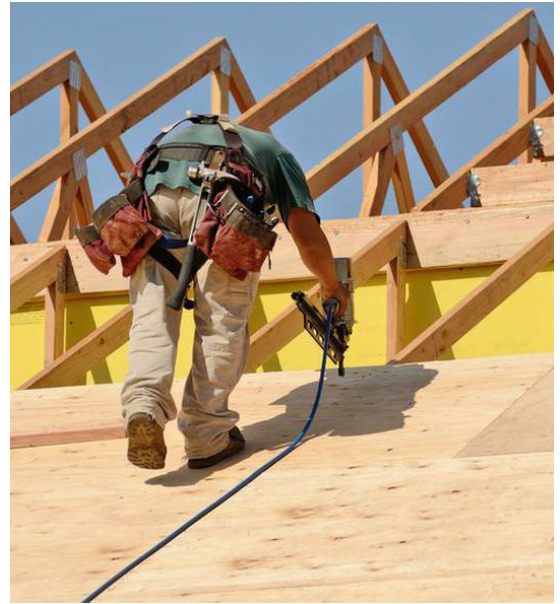
Code	Description	Sheet Size	Thickness	Lay-up (Ply)	Weight (Kg)
P1025	CD Structural Pine Ply	2400x1200	7mm	3	10.9
P1035	CD Structural Pine Ply	2400x1200	9mm	3	14.0
P1045	CD Structural Pine Ply	2400x1200	12mm	5	18.7
P1055	CD Structural Pine Ply	2400x1200	15mm	5	23.3
P1075	CD Structural Pine Ply	2400x1200	18mm	7	28.0
P1095	CD Structural Pine Ply	2400x1200	21mm	7	32.7
P1105	CD Structural Pine Ply	2400x1200	25mm	9	38.9

Mass has been calculated considering 9% moisture content and sheet size of 2400x1200 and a density of 540 kg/m³.

Dimensional Properties

Tolerances

- Length: +0mm/-2mm on the specified nominal value.
- Width: +0mm/-2mm on the specified nominal value.
- Thickness: $\pm 0,4$ mm on the specified nominal value for sanded grades.
- Squareness: Within 1mm per meter
- Straightness: Within 1mm per meter
- Diagonals: Below 3mm difference on a 2400x1200 sheet.



Structural Properties

F-Grade Values AS/NZS 2269

		Strength (MPa)		Stiffness (MPa)		Tensile (MPa)		Shear (MPa)		Compression in plane (MPa)	
		//	⊥	//	⊥	//	⊥	//	⊥	//	⊥
Square Edge F8	CD	25	25	9,100	9,100	15	15	4.7	4.7	20	20

Nominal strengths of Plymasters Square Edge F8 Plywood

Nominal Thickness	Weight	Nominal strengths (Limit State) per mm Width							
		Parallel to Face Grain				Perpendicular to Face Grain			
		Bending Stiffness EI Stiffness, EI	Bending Moment fz	Rolling Shear fl/Q	Axial Compression fOA CCompressions	Bending Stiffness EI Stiffness, EI	Bending Moment fz	Rolling Shear fl/Q	Axial Compression fOA
mm	Pa	kNmm ²	Nmm	N	N	kNmm ²	Nmm	N	N
7	37	269	206	9.8	97	18.4	23.8	4.3	50.6
9	46	512	317	12.2	120	35.0	36.5	5.4	62.8
12	62	1,030	470	17.5	146	299	206	10.3	100
15	77	1,964	723	21.7	181	570	317	12.7	124
18	93	3,084	937	24.0	218	1,365	535	20.0	150
21	108	4,862	1,273	28.5	242	2,093	723	22.2	185
25	127	7,901	1,761	33.4	302	3,383	939	25.2	200

Bracing Ratings

In accordance to AS/NZS 2269, our Structural square-edge and Bracing is rated F8 which includes testing for parallel and perpendicular bending, stiffness, tensile, shear and compression strength. The following table shows bracing ratings according to P21 racking test.

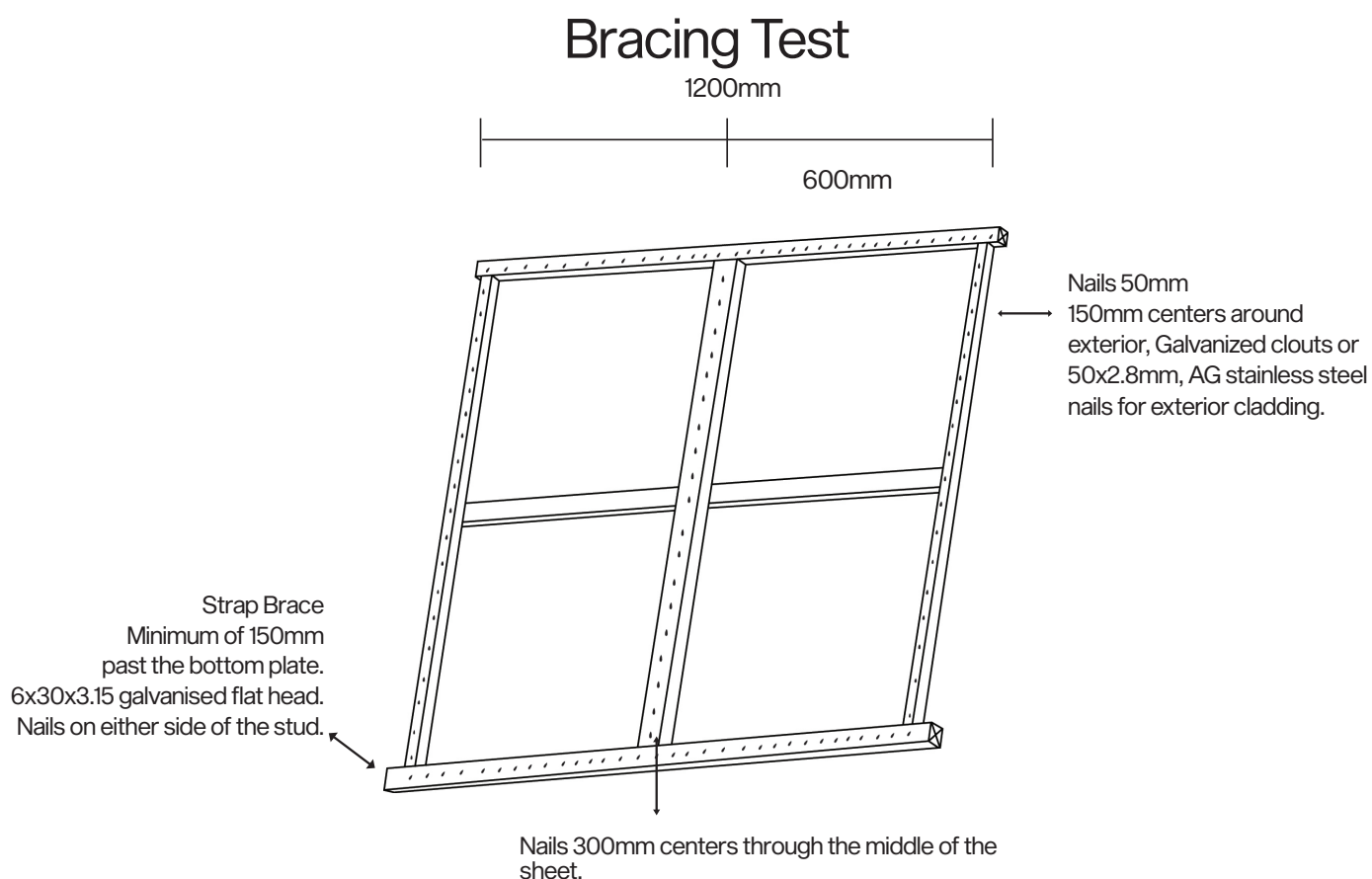
Bracing ratings for Structural Ply

CD Structural Ply	Min Wall Length	Plywood Thickness	Max Stud Spacing	Wind*		Earthquake**	
	mm	mm	mm	BU/m	kN	BU/m	kN
	1200	7.0	600	142	7.1	144	7.2

Notes: 20 bracing units = 1 kN

* As limited by the serviceability load capacity

** As limited by the ultimate load capacity



Test Notes:

- Walls were constructed using 90x45 MSG8 studs (600 centres), plates and noggs.
- For 6.5mm and 7mm the plywood was fixed with 50x2.8 galvanised clouts at 150mm centres around the perimeter and at 300mm centres in the middle.
- For the 12.5mm Plywood 50x2.8mm Annular Grooved Stainless steel fixings were used at the same centres as above.
- Straps of 25x0.9mm around the bottom plate at each outside stud and extended a minimum of 150mm past the top of the bottom plate were used with at least 6 timber bracket galvanised 30x3.15mm FH nails on each side of the plate giving 6kN on each side of the stud.
- Tested on a concrete floor with 2 M12 hold down bolts and 50x50x3 galvanised washers on each.
- Tested by Scion, New Zealand April 2011

Thermal Conductivity

Plymasters CD Structural Pine Ply has an average thermal conductivity of 0.13 W/mK. The following table shows the specific conductivity for each thickness.

Thickness vs Thermal Conductivity

Thickness	Conductivity
mm	W/mK
9	0.112
12	0.138
15	0.134
18	0.158

Fire Tests On Building Materials

Plymasters CD Structural Pine Ply has been tested for ignitability, flame propagation, heat release and smoke release in accordance to AS/NZS 1530.3:1999.

Tested with a clean faced Structural Ply by AWTA Product Testing, Australia, February 2011.

Early Fire Hazard Properties for 12mm Ply

Regulatory Indexes	Result	Range
Ignitability Index	14	0-20
Spread of Flame Index	7	0-10
Heat Evolved Index	5	0-10
Smoke Developed Index	2	0-10

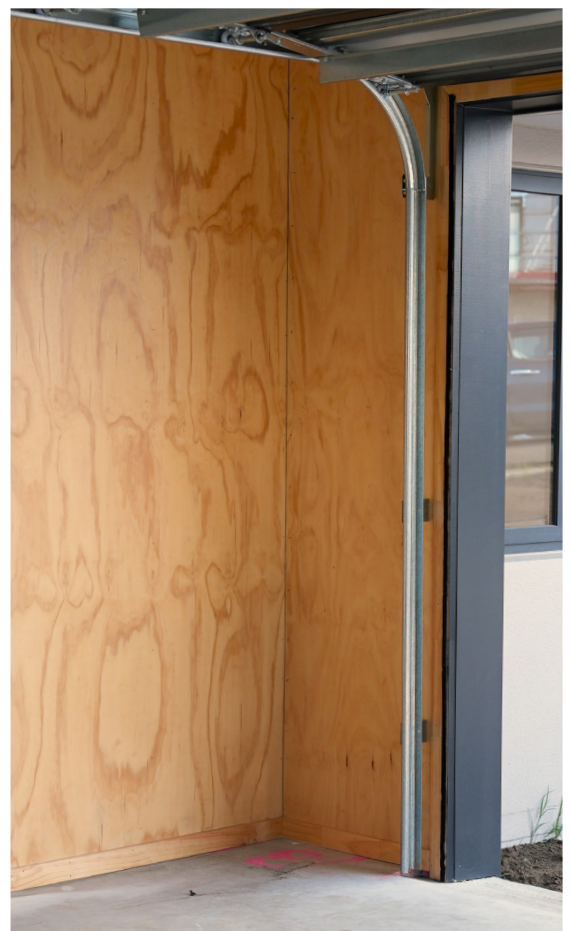
Fixings And Adhesives

All fasteners used must be corrosion resistant to the appropriate specification level depending on the end use; a life expectancy of 15 to 50 years should be considered.

When fixing CD Structural Pine Ply for Flooring it is important that you use glue and screws to minimize the potential chance of squeaking. Mechanical fixings must be either annular grooved stainless steel nails 50mm long or stainless steel screws at least 50mm in length. Fixings should be at 150mm centres at all points of contact with the framing.

Always allow an expansion gap when installing CD Structural Pine Ply for Flooring. This gap will depend on the size of the floor but at least a 3mm gap is suitable for most applications.

Ideal applications include: Residential or commercial flooring, flooring in wet areas, such as bathrooms toilets or kitchens, for use under rubber membranes to provide the best substrate, decks, roofing, wall linings, general industrial applications, and flooring for mezzanine floors.



Storage And Handling

Plymasters CD Structural Pine Ply should be handled and stored with care. In order for you to get the finish and end result that you are looking for:

- The product should be stored until used in a dry area protected from the sun, rain, wind or snow.
- The product should not be placed directly on the ground unless inside and should be supported with at least 3 but preferably 4 supports.
- It should always be stored flat and not on the edge. This is a dangerous practice and could cause injury if they were to fall. Careful handling and proper storage will prolong the usability of the panel. Dropping panels is one of the most common ends to an otherwise good panel.
- If possible store in the room for at least 24 hours prior to installation when using Plymasters CD Structural Pine Plywood inside. This will give it time to reach equilibrium moisture content and reduce the potential for movement after installation.
- For further information about storage and handling recommendations, please refer to standard AS/NZS 2269.

Certifications & Sustainability

The plantation forests that supply wood for Plymasters are certified as compliant with the CERTFOR sustainable forest management standard. CERTFOR is endorsed by PEFC (Programme for the Endorsement of Forest Certification Schemes). With some 187 million hectares under certification, PEFC is the world's largest forest certification programme.



AS/NZS 2269

Plymasters CD Structural Pine Ply has been manufactured and tested to meet all requirements of Plywood Structural Standard AS/NZS 2269 in products that are stamped and labelled accordingly, as per the following licenses granted by SAI global:

- Horcones Arauco Mill: Licence No. SMKB21663/1
- Ranquil Nueva Aldea Mill: Licence No. SMKB21663

PS 1-09

All grade stamped Plymasters Construction panels are manufactured according to criteria established in the US PS 1-09 standard. Plymasters CD Structural Pine Ply qualifies for TECO and PTL grade stamping under voluntary product standard PS 1-09 for grades AA through CD, including structural applications.

PEFC

The plantation forests that supply wood for Plymasters Construction products are certified as compliant with the CERTFOR sustainable forest management standard. CERTFOR is endorsed by PEFC (Programme for the Endorsement of Forest Certification Schemes). With some 187 million hectares under certification, PEFC is the world's largest forest certification program.



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TERMS & CONDITIONS

All goods are subject to our conditions of sale. Please confirm pricing with the Plymasters Sales team on 0800 344 112 or email sales@plymasters.co.nz. All pricing is GST exclusive. Errors and omissions excepted. Please do not go off the catalogue for colour matching as this is subject to design and print variation. For more information visit plymasters.co.nz. Products are subject to availability. All pricing excludes freight costs and HI-ab deliveries incur extra fees. Sheets to be inspected upon arrival and credits are not issued for sheets that have been cut or altered to suit. All sales are subject to Plymasters terms and conditions.

Handling & Storage

Plywood is a natural timber product that can be affected by changes in ambient weather conditions, possibly causing previously flat sheets to bow. Precautions are taken to minimise this. However, once the plywood has left our warehouse, we cannot guarantee sheets to remain flat unless they are fastened. This is particularly important where free standing kitchen/cabinet doors are concerned.

All storage must be in a flat position with adequate face protection.

Construction Plywood

Construction Plywood sold by Plymasters is not necessarily "structurally rated" for use in bracing situations unless stated.

Exterior Conditions

Most Plywood, apart from the Euro Gripdeck, do not carry guarantees for NZ exterior weather conditions.

If Marine Ply is used in exterior situations, it is the purchaser's responsibility to provide adequate surface and edge protection to ensure ultimate performance.



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