



WELLEY TIMBER

**PLYWOOD TECHNICAL DATA SHEET
(PERFORMANCE CHARACTERISTIC)
MALAYSIAN TROPICAL MEDIUM LIGHT HARDWOOD
MARINE PLYWOOD TO BS1088:2003**

Thickness/mm (EN 324:1993)	Type	6mm / 3 plies	Composition Ratio		37.50%
	Min	5.42	Veneer Thickness (mm)	Face/ Back	0.60
	Max	6.38		Short Core	4.50
	Lay-up	- -		Long Core	

Dimensional Tolerance (EN 324: 1993)

Length & Width	± 3.5mm
Squareness	± 1 mm/m
Straightness	± 1 mm/m

Bonding Quality/ durability	Bonding Class 3			
Bending Strength and Stiffness	F70/40 , E140/140	Result	F = 77.195 / 136.460	
			E = 16714.000 / 26095.167	
Release of formaldehyde	Class E1 (EN 13986 Annex B for Phenol formaldehyde adhesives)			
Density	≥ 500kg/m ³	Result	675.318 kg/m ³	
Reaction to fire	D-s2, d0 (EN 13986 Tab. 8 for density ≥ 400kg/m ³ and thickness ≥ 9mm			
Water vapour permeability	Interpolated from EN13986 Tab. 9 for density 700kg/m ³			
	wet cup	70	dry cup	200
Airborne sound insulation	Calculated per EN 13986 section 5.10 using formula (t = thickness in mm)			
	R = 13 x 1g (0.600 x t) + 14			
Sound absorption coefficient	EN 13986 Tab. 10			
	250 - 500 Hz: 0.10		1000 - 2000 Hz: 0.30	
Thermal conductivity	Interpolated from EN13986 Tab. 9 for density 700kg/m ³			
	λ = 0.17 W / (m.K)			
Content of pentachlorophenol	EN 13986 section 5.18			

WELLEY TIMBER INDUSTRIES SDN BHD (726389-M)

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Thickness/mm 324:1993)	Type	9mm / 5 plies	Composition Ratio		42.90%
	Min	8.33	Veneer Thickness (mm)	Face/ Back	0.75
	Max	9.47		Short Core	3.50
	Lay-up	- - -		Long Core	0.60

Dimensional Tolerance (EN 324: 1993)

Length & Width	± 3.5mm
Squareness	± 1 mm/m
Straightness	± 1 mm/m

Bonding Quality/ durability	Bonding Class 3			
Bending Strength and Stiffness	F50/40 , E140/100	Result	F = 93.765 / 73.344	
			E = 15749.833/ 11792.167	
Release of formaldehyde	Class E1 (EN 13986 Annex B for Phenol formaldehyde adhesives)			
Density	≥ 500kg/m ³	Result	573.973 kg/m ³	
Reaction to fire	D-s2, d0 (EN 13986 Tab. 8 for density ≥ 400kg/m ³ and thickness ≥ 9mm			
Water vapour permeability	Interpolated from EN13986 Tab. 9 for density 700kg/m ³			
	wet cup	70	dry cup	200
Airborne sound insulation	Calculated per EN 13986 section 5.10 using formula (t = thickness in mm)			
	R = 13 x 1g (0.600 x t) + 14			
Sound absorption coefficient	EN 13986 Tab. 10			
	250 - 500 Hz: 0.10		1000 - 2000 Hz: 0.30	
Thermal conductivity	Interpolated from EN13986 Tab. 9 for density 700kg/m ³			
	λ = 0.17 W / (m.K)			
Content of pentachlorophenol	EN 13986 section 5.18			

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Thickness/mm (EN 324:1993)	Type	12mm / 7 plies	Composition Ratio	48.80%
	Min	11.20	Veneer Thickness (mm)	Face/ Back 0.75
	Max	12.56		Short Core 2.70/3.50
	Lay-up	- - - - -		Long Core 0.75

Dimensional Tolerance (EN 324: 1993)				
Length & Width	± 3.5mm			
Squareness	± 1 mm/m			
Straightness	± 1 mm/m			
Bonding Quality/ durability	Bonding Class 3			
Bending Strength and Stiffness	F40/40 , E140/120	Result	F =88.910 / 91.938	
			E = 14979.667/12869.167	
Type of Glue	Phenol Formaldehyde HL-4645			
Release of formaldehyde	Class E1 (EN 13986 Annex B for Phenol formaldehyde adhesives)			
Density	≥ 500kg/m ³	Result	745.484 kg/m ³	
Reaction to fire	D-s2, d0 (EN 13986 Tab. 8 for density ≥ 400kg/m ³ and thickness ≥ 9mm)			
Water vapour permeability	Interpolated from EN13986 Tab. 9 for density 700kg/m ³			
	wet cup	70	dry cup	200
Airborne sound insulation	Calculated per EN 13986 section 5.10 using formula (t = thickness in mm)			
	R = 13 x 1g (0.600 x t) + 14			
Sound absorption coefficient	EN 13986 Tab. 10			
	250 - 500 Hz: 0.10		1000 - 2000 Hz: 0.30	
Thermal conductivity	Interpolated from EN13986 Tab. 9 for density 700kg/m ³			
	λ = 0.17 W / (m.K)			
Content of pentachlorophenol	EN 13986 section 5.18			

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Thickness/mm (EN 324:1993)	Type	15mm / 9 plies	Composition Ratio		
	Min	14.15	Veneer Thickness (mm)	Face/ Back	0.75
	Max	15.65		Short Core	2.70/3.50
	Lay-up	- - - - - - -		Long Core	0.60/0.75

Dimensional Tolerance (EN 324: 1993)

Length & Width	± 3.5mm
Squareness	± 1 mm/m
Straightness	± 1 mm/m

Bonding Quality/ durability	Bonding Class 3			
Bending Strength and Stiffness	F20/35, E70/80	Result	F = 42.136 / 61.361	
			E = 7488.500/ 8871.367	
Release of formaldehyde	Class E1 (EN 13986 Annex B for Phenol formaldehyde adhesives)			
Density	≥ 500kg/m ³	Result	668.804 kg/m ³	
Reaction to fire	D-s2, d0 (EN 13986 Tab. 8 for density ≥ 400kg/m ³ and thickness ≥ 9mm)			
Water vapour permeability	Interpolated from EN13986 Tab. 9 for density 700kg/m ³			
	wet cup	70	dry cup	200
Airborne sound insulation	Calculated per EN 13986 section 5.10 using formula (t = thickness in mm)			
	R = 13 x 1g (0.600 x t) + 14			
Sound absorption coefficient	EN 13986 Tab. 10			
	250 - 500 Hz: 0.10		1000 - 2000 Hz: 0.30	
Thermal conductivity	Interpolated from EN13986 Tab. 9 for density 700kg/m ³			
	λ = 0.17 W / (m.K)			
Content of pentachlorophenol	EN 13986 section 5.18			

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Thickness/mm (EN 324:1993)	Type	18mm / 11 plies	Composition Ratio		43.00%
	Min	17.06	Veneer Thickness (mm)	Face/ Back	0.75
	Max	18.74		Short Core	2.70
	Lay-up	- - - - - - - -		Long Core	0.75

Dimensional Tolerance (EN 324: 1993)	
Length & Width	± 3.5mm
Squareness	± 1 mm/m
Straightness	± 1 mm/m

Bonding Quality/ durability	Bonding Class 3		
Bending Strength and Stiffness	F35/40, E90/90	Result	F = 65.634 / 72.924
			E = 8765.983 / 9004.383
Type of Glue	Phenol Formaldehyde HL-4645		
Release of formaldehyde	Class E1 (EN 13986 Annex B for Phenol formaldehyde adhesives)		
Density	≥ 500kg/m ³	Result	654.706 kg/m ³
Reaction to fire	D-s2, d0 (EN 13986 Tab. 8 for density ≥ 400kg/m ³ and thickness ≥ 9mm)		
Water vapour permeability	Interpolated from EN13986 Tab. 9 for density 700kg/m ³		
	wet cup	70	dry cup 200
Airborne sound insulation	Calculated per EN 13986 section 5.10 using formula (t = thickness in mm)		
	R = 13 x 1g (0.600 x t) + 14		
Sound absorption coefficient	EN 13986 Tab. 10		
	250 - 500 Hz: 0.10		1000 - 2000 Hz: 0.30
Thermal conductivity	Interpolated from EN13986 Tab. 9 for density 700kg/m ³		
	λ = 0.17 W / (m.K)		
Content of pentachlorophenol	EN 13986 section 5.18		

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Thickness/mm (EN 324:1993)	Type	25mm / 13 plies	Composition Ratio		44.40%
	Min	23.85	Veneer Thickness (mm)	Face/ Back	0.75
	Max	25.85		Short Core	2.70/3.50
	Lay-up	- - - - - - - - - -		Long Core	0.60/0.75

Dimensional Tolerance (EN 324: 1993)	
Length & Width	± 3.5mm
Squareness	± 1 mm/m
Straightness	± 1 mm/m

Bonding Quality/ durability	Bonding Class 3			
Bending Strength and Stiffness	F35/25, E70/90	Result	F = 56.497 / 41.971	
			E = 6553.350 / 8775.633	
Release of formaldehyde	Class E1 (EN 13986 Annex B for Phenol formaldehyde adhesives)			
Density	≥ 500kg/m ³	Result	655.176 kg/m ³	
Reaction to fire	D-s2, d0 (EN 13986 Tab. 8 for density ≥ 400kg/m ³ and thickness ≥ 9mm)			
Water vapour permeability	Interpolated from EN13986 Tab. 9 for density 700kg/m ³			
	wet cup	70	dry cup	200
Airborne sound insulation	Calculated per EN 13986 section 5.10 using formula (t = thickness in mm)			
	$R = 13 \times 1g (0.600 \times t) + 14$			
Sound absorption coefficient	EN 13986 Tab. 10			
	250 - 500 Hz: 0.10		1000 - 2000 Hz: 0.30	
Thermal conductivity	Interpolated from EN13986 Tab. 9 for density 700kg/m ³			
	$\lambda = 0.17 \text{ W / (m.K)}$			
Content of pentachlorophenol	EN 13986 section 5.18			