

<b>Laboratory</b>	<b>Central Wood Testing Laboratory, The Rubber Board, RRDTC Complex, Manganam P.O., Kottayam, Kerala</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Mechanical Testing</b>	<b>Issue Date</b>	<b>17.12.2013</b>
<b>Certificate Number</b>	<b>T-1682</b>	<b>Valid Until</b>	<b>16.12.2015</b>
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<b>S.No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
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#### **I. BUILDING MATERIALS**

<b>1. Timber</b>	Moisture Content		IS 1708 (Part 1)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	1 - 80%
	Density		IS 1708 (Part 2)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	1 - 1500 kg/m <sup>3</sup>
	Volumetric shrinkage		IS 1708 (Part 3)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	1 -10%
	<b>Static Bending Test</b> Fibre stress at Limit of Proportionality (FS at LP)		IS 1708 (Part 5)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	150 - 800 kg/ cm <sup>2</sup>
	Horizontal Shear Stress at Limit of Proportionality (HS at LP)		IS 1708 (Part 5)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	5 - 30 kg/ cm <sup>2</sup>
	Horizontal Shear Stress at Maximum load (HS at ML)		IS 1708 (Part 5)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	10 - 40 kg/ cm <sup>2</sup>
	Modulus of Rupture (MOR)		IS 1708 (Part 5)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	250 -1200 kg/ cm <sup>2</sup>
	Modulus of Elasticity (MOE)		IS 1708 (Part 5)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	20000 -120000 kg/cm <sup>2</sup>

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	<b>Timber</b>	Maximum Load (ML)	IS 1708 (Part 5)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	50 - 350 kg
		<b>Compressive Strength Parallel to Grain Test</b>		
		Compressive Stress at limit of proportionality (CS at LP)	IS 1708 (Part 8)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	100 - 500 kg/ cm <sup>2</sup>
		Compressive Stress at maximum load (CS at ML)	IS 1708 (Part 8)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	150 - 900 kg/ cm <sup>2</sup>
		Modulus of Elasticity (MOE)	IS 1708 (Part 8)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	10000 - 60000 kg/ cm <sup>2</sup>
		Maximum Load (ML) kg	IS 1708 (Part 8)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	500 - 2500 kg/ cm <sup>2</sup>
		<b>Compressive Strength Perpendicular To Grain Test</b>		
		Compressive Stress at limit of proportionality (CS at LP)	IS 1708 (Part 9)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	50-200 kg/ cm <sup>2</sup>
		Compressive Stress (CS) at compression of 2.5mm	IS 1708 (Part 9)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	75-500 kg/ cm <sup>2</sup>

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	<b>Timber</b>	Modulus of Elasticity (MOE)	IS 1708 (Part9)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	5000-50000 kg/ cm <sup>2</sup>
		<b>Hardness Test</b> Hardness	IS 1708 (Part10)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	150-1000 kg
		<b>Shear/ Block Shear Strength Test</b> Max Shearing Stress	IS 1708 (Part 11)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	20-350 kg/cm <sup>2</sup>
		Max load	IS 1708 (Part11)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	100-4500
		<b>Tensile Strength Parallel to Grain</b>  Tensile stress at limit of proportionality (TS at LP)	IS 1708 (Part12)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	75-700 kg/cm <sup>2</sup>
		Tensile stress at maximum load (TS at ML)	IS 1708 (Part12)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	150-1500 kg/cm <sup>2</sup>
		Maximum Load	IS 1708 (Part12)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	75-1000 kg

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	<b>Timber</b>	<b>Cleavage Strength</b> Cleavage Resistance	IS 1708 (Part14)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	5-250 kg/cm
		<b>Nail And Screw Holding Power</b> Max Load for Nail kg	IS 1708 (Part15)- 1986 2 <sup>nd</sup> Revision Amendment 2 Reaffirmed year 2010	50-750 kg
		Max Load for Screw kg		50-1000 kg
<b>2.</b>	<b>Laminated timber</b>	Boiling water soak delamination test	JAS: 1996 for glued laminated timber	Visual Observation  Visual observation
		Cold water soak delamination test	JAS: 1996 for glued laminated timber	
<b>3.</b>	<b>Door shutter</b>	<b>Dimensions and squareness</b> Height	IS 4020-1998 (Part 2) 3 <sup>rd</sup> Revision Amendment 2 Reaffirmed Year 2011	1700-2500mm
		Width		300-1000mm
		Thickness		15-45mm
		Impact indentation test	IS 4020-1998 (Part 5) 3 <sup>rd</sup> Revision Amendment 2 Reaffirmed Year 2011	0.05 - 10mm
		Flexure test	IS 4020-1998 (Part 6) 3 <sup>rd</sup> Revision Amendment 2 Reaffirmed Year 2011	1-100mm

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	<b>Door shutter</b>	Edge loading test	IS 4020-1998(Part 7) 3 <sup>rd</sup> Revision Amendment 2 Reaffirmed Year 2011	1-50mm
		Shock resistance test	IS 4020-1998(Part 8) 3 <sup>rd</sup> Revision Amendment 2 Reaffirmed Year 2011	Visual Observation
		Buckling resistance test	IS 4020-1998(Part 9) 3 <sup>rd</sup> Revision Amendment 2 Reaffirmed Year 2011	1-150mm
		Slamming test	IS 4020-1998(Part10) 3 <sup>rd</sup> Revision Amendment 2 Reaffirmed Year 2011	Visual Observation
		Misuse test	IS 4020-1998(Part11) 3 <sup>rd</sup> Revision Amendment 2 Reaffirmed Year 2011	1- 600mm
		Glue adhesion test	IS 4020-1998(Part15) 3 <sup>rd</sup> Revision Amendment 2 Reaffirmed Year 2011	Visual Observation

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