

Laboratory	Structwel Designers and Consultants Pvt. Ltd., Unit No. 23/24, C-Wing, Bhanukant Complex, Jn. Of Aarey Road and Western Express Highway, Goregaon (E), Mumbai, Maharashtra		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	09.03.2015
Certificate Number	T-1827	Valid Until	08.03.2017
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	BUILDING MATERIALS			
1.	Coarse Aggregate	Aggregate Abrasion value	IS 2386 (Part 4): 1963 (RA 2011)	5 % to 50 %
		Specific Gravity	IS 2386 (Part 3): 1963 (RA 2011)	1 to 4
		Bulk Density	IS 2386 (Part 3): 1963 (RA 2011)	1 kg/l to 2 kg/l
		Ten Percent Fines value	IS 2386 (Part 4): 1963 (RA 2011)	4 ton to 40 ton
		Sieve Analysis	IS 2386 (Part 1): 1963 (RA 2011)	125 mm to 4.75 mm
		Water Absorption	IS 2386 (Part 3): 1963 (RA 2011)	0.1 % to 10 %
		Impact Value	IS 2386 (Part 4): 1963 (RA 2011)	5 % to 50 %
		Crushing Value	IS 2386 (Part 4): 1963 (RA 2011)	5 % to 50 %
		Elongation / Flakiness Index	IS 2386 (Part 1): 1963 (RA 2011)	5 % to 50 %
2.	Fine Aggregate	Specific Gravity.	IS 2386 (Part 3): 1963 (RA 2011)	1 to 4
		Bulkage	IS 2386 (Part 3): 1963 (RA 2011)	1 % to 50 %
		Percentage Silt by Volume	CPWD Specification 91-92, Issue Year 2009 Appendix D	1 % to 50 %
		Materials Finer than 75 micron	IS 2386 (Part 1): 1963 (RA 2011)	0.1 % to 25 %
		Sieve Analysis	IS 2386 (Part 1): 1963 (RA 2011)	4.75 mm to 75 μm
		Water Absorption	IS 2386 (Part 3): 1963 (RA 2011)	0.1 % to 10 %

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3.	Concrete			
a.	Core/ Cylinder/ Cube	Compressive Strength	IS 456: 2000 (RA 2011) IS 516: 1959 (RA 2013)	5 N/mm ² to 100 N/mm ²
b.	Masonry blocks	Moisture Movement	IS 2185 (Part 1): 2005 (RA 2010)	0.001 % to 1 %
		Density	IS 2185 (Part 1): 2005 (RA 2010)	1800 kg/m ³ to 2500 kg/m ³
		Drying Shrinkage	IS 2185 (Part 1): 2005 (RA 2010)	0.001 % to 1 %
		Compressive Strength	IS 2185 (Part 1): 2005 (RA 2010)	1 N/mm ² to 40 N/mm ²
		Water Absorption	IS 2185 (Part 1): 2005 (RA 2010)	0.1 % to 10 %
c.	Beam (Prism)	Flexural Strength	IS 516: 1959 (RA 2013)	1 N/mm ² to 10 N/mm ²
4.	Bricks	Water Absorption	IS 3495 (Part 2): 1992 (RA 2011)	4 % to 40 %
		Compressive Strength	IS 3495 (Part 1): 1992 (RA 2011)	3.5 N/mm ² to 40 N/mm ²
		Efflorescence	IS 3495 (Part 3): 1992 (RA 2011)	Qualitative
5.	Flush door shutter	Knife Test	IS 4020 (Part 14): 1998 (RA 2013)	Qualitative
		Glue Adhesion	IS 4020 (Part 15): 1998 (RA 2013)	1 mm to 150 mm
		End Immersion	IS 4020 (Part 13): 1998 (RA 2013)	Qualitative
6.	Plywood	Density & Moisture Content	IS 1734 (Part 1): 1983 (RA 2013)	0.5 g/cc to 1.5 g/cc 1 % to 50 %
		Adhesion of Plies	IS 1734 (Part 5): 1983 (RA 2013)	Qualitative
		Glue Shear Strength	IS 1734 (Part 4): 1983 (RA 2013)	2500 N to 6500 N
		Tensile Strength	IS 1734 (Part 9): 1983 (RA 2013)	120 N/mm ² to 60 N/mm ²

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7.	Paver Block	Dimension	IS 15658: 2006 (RA 2011)	50 mm to 300 mm
		Plan Area	IS 15658: 2006 (RA 2011)	0.15 m ³ to 0.3 m ³
		Water Absorption	IS 15658: 2006 (RA 2011)	1 % to 25 %
		Compressive Strength	IS 15658: 2006 (RA 2011)	5 N/mm ² to 70 N/mm ²
		Tensile Splitting Strength	IS 15658: 2006 (RA 2011)	5 N/mm ² to 20 N/mm ²
		Flexural Strength	IS 15658: 2006 (RA 2011)	5 N/mm ² to 25 N/mm ²
II. MECHANICAL PROPERTIES OF MATERIALS				
1.	High Strength Deformed Steel Bars and Wires for Concrete Reinforcement	Percentage Elongation	IS 1608: 2005 (RA 2013)	5 % to 40 %
		Weight per Meter	IS 1786: 2008 (RA 2013)	0.200 kg/m to 10.0 kg/m
		Yield strength	IS 1608: 2005 (RA 2013)	200 N/mm ² to 800 N/mm ² (Upto 400kN)
		Ultimate Tensile strength	IS 1608: 2005 (RA 2013)	200 N/mm ² to 900 N/mm ² (Upto 400kN)
		Bend Test	IS 1599: 2012	Qualitative (Upto 20 mm dia.) (Mandrel Dia: 12,16,18,20,24,30,32, 36,40,42,48,50,56,64, 70,72,80,84,96,100, 112,120 & 140 mm)

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	High Strength Deformed Steel Bars and Wires for Concrete Reinforcement	Rebend Test	IS 1608: 2005 (RA 2013)	Qualitative (Upto 20 mm dia.) (Mandrel Dia: 12,16,18,20,24,30,32, 36,40,42,48,50,56,64, 70,72,80,84,96,100, 112,120 &140 mm)

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