

Laboratory	S. M. Consultants, Quality Control Division, Plot No. 58, Chandragiri Colony, Trimulgherry, Secunderabad, Telangana		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	22.08.2014
Certificate Number	T-3085	Valid Until	21.08.2016
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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.	Aggregate (Coarse / Fine)	Sieve Analysis	IS: 2386 (Part-1)-1963 Reaf. 2007	4.75mm to 80mm
		Bulk Density	IS: 2386 (Part-III)-1963 Reaffirmed 2007	1 gm/cc to 3 gm/cc
		Los Angles Abrasion Value	IS: 2386 (Part-IV)-1963 Reaffirmed 2007	5% to 60 %
		Impact Value	IS: 2386 (Part-IV)-1963 Reaffirmed 2007	5 % to 60 %
		Crushing Value	IS: 2386 (Part-IV)-1963 Reaffirmed 2007	5 % to 60 %
		Water Absorption	IS: 2386 (Part-III)-1963 Reaffirmed 2007	0.1 % 10 %
		Specific gravity	IS: 2386 (Part-III)-1963 Reaffirmed 2007	1.5 to 4
		Flakiness Index	IS: 2386 (Part-I)-1963 Reaffirmed 2007	5 % to 80 %
		Elongation Index	IS: 2386 (Part-I)-1963 Reaffirmed 2007	5% to 80 %
		10% Fine Value	IS: 2386 (Part-IV)-1963 Reaffirmed 2007	1 kN to 600 kN

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2.	Concrete (Hardened)	Compressive Strength	IS: 516-1959 Reaffirmed 2008	1 N/mm ² to 80 N/mm ²
3.	Bricks (Clay & Fly ash brick)	Dimensions	IS: 1077-1992 Reaffirmed 2007	L= 1mm to 5000mm B= 1mm to 2600mm T= 1mm to 1600mm
		Compressive Strength	IS: 3495 (Pt I)-1992 Reaffirmed 2007	1 N/mm ² to 20 N/mm ²
		Water Absorption	IS:3495 (Pt II)-1992 Reaffirmed 2007	1% to 25 %
		Efflorescence	IS: 3495 (Pt III)-1992 Reaffirmed 2007	Qualitative
4.	Hallow/Solid Block	Density	IS:2185-Part 1-2005	1000 kg/m ³ to 3000 kg/m ³
		Water Absorption	IS:2185-Part 1-2005	1 to 20%
		Compressive Strength	IS:2185-Part 1-2005	1 N/mm ² to 30 N/mm ²
5.	Paver Block	Compressive strength	IS:15658-2006	1 N/mm ² to 70 N/mm ²
		Water Absorption	IS:15658-2006	0.1% to 30%
		Resistance to wear	IS:15658-2006	1mm to 5mm

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II. SOIL AND ROCK				
1.	Soil	Specific Gravity	IS: 2720 (Pt-III) Sec.1/ - 1980, Reaffirmed 2007	1 to 4
		Grain Size Analysis (Dry Sieve Analysis)	IS: 2720 (Pt-IV)-1985, Reaffirmed 2005	100mm to 0.075mm
		Grain Size Analysis (Wet Sieve Analysis)	IS: 2720 (Pt-IV)-1985, Reaffirmed 2005	4.75mm to 75 micron
		Liquid Limit	IS: 2720 (Part 5)-1985 Reaffirmed 2005	15% to 80 %
		Plastic Limit	IS: 2720 (Part 5)-1985 Reaffirmed 2005	5% to 50 %
		Water Content	IS: 2720 (Part-II) 1973 Reaffirmed 2005	0.5 % to 50 %
		Direct Shear Test	IS 2720 (Part-13) 1986 Reaffirmed 2007	C = 0 to 0.3 kg/cm ² Φ = 0° to 50°
		Tri-axial Compression Without pore pressure	IS: 2720 (Part –11)-1993 Reaffirmed 2007	C = 0.2 to 10 kg/cm ² Φ = 0° to 30°
		Consolidation Test	IS 2720 (Part-15) Reaffirmed 2007	0.1 Cc to 0.5 Cc
		California Bearing Ratio (CBR)	IS:2720(Part-16)-1987 Reaffirmed 2007	1 % to 100 %

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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
		Light Compaction	IS: 2720 (Part VII)-1980 Reaffirmed 2007	OMC 1% to 30 % MDD 1.2 gm/cc to 3 gm/cc
		Heavy compaction	IS: 2720 (Part VIII)-1983 Reaffirmed 2005	OMC 1% to 30 % MDD 1.2 gm/cc to 3 gm/cc
		Free Swell Index	IS 2720 (Part XXXX)-1977 Reaffirmed 2007	1% to 100 %
2.	Rock	Unconfined Compressive Strength	IS: 9143 - 1979	1 N/mm ² to 300 N/mm ²
		Water absorption	IS:1124-1974 Reaffirmed 1998	0 to 10%
III. MECHANICAL PROPERTIES OF MATERIALS				
1.	Steel Reinforcement	Mass/m	IS: 1786-2008	0.01 kg/m to 10 kg/m
	Steel (6 mm to 40 mm dia/width)	Tensile Strength	IS: 1608-2005	100 N/mm ² to 700 N/mm ² 1000 kN
		Yield Stress	IS: 1608-2005	100 N/mm ² to 700N/mm ²
		% Elongation	IS: 1608-2005	5% to 30%

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