

Laboratory **Civil Engineering Testing Laboratory, Acropolis Institute of Technology and Research, Indore Bypass Road, Mangaliya Square, Indore, Madhya Pradesh**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-6536** (in lieu of T-2760 & T-2761)

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Validity **17.12.2017 to 16.12.2019**

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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CHEMICAL TESTING

I.	WATER			
1.	Water (For Construction purpose)	pH	IS 3025:1983 (Part-11) Reaffirmed-2012	1 to14
		Sulphates (as SO ₃)	IS 3025:1986(Part-24) Reaffirmed-2014	1 mg/l to 100 mg/l
		Chlorides (as Cl)	IS 3025:1988(Part-32) Reaffirmed-2014	10 mg/l to 1000 mg/l
		Organic Solids	IS 3025:1984 (Part-18) Reaffirmed-2012	1 mg/l to 1000 mg/l
		Inorganic Solids	IS 3025:1984 (Part-18) Reaffirmed-2012, Amd-1	10 mg/l to 5000 mg/l
		Total Suspended Solids	IS 3025:1984 (Part-17) Reaffirmed-2012, Amd-1	1 mg/l to 1000 mg/l
		Volume of 0.02 N H ₂ SO ₄ Required to Neutralize 100 ml of the Sample Using Mixed Indicator.	IS 3025:1986(Part-23) Reaffirmed-2014,Amd 1	0.5 ml to 30 ml
		Volume of 0.02 N NaOH Required to Neutralize 100 ml of the Sample Using Phenolphthalein Indicator.	IS 3025:1986(Part-22) Reaffirmed-2014	0.5 ml to 30 ml

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Convenor

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MECHANICAL TESTING

I.	SOIL & ROCK			
1.	Soil	Liquid Limit	IS 2720: 1985(Part-5) Reaffirmed-2010	25% to 80%
		Plastics Limit	IS 2720: 1985 (Part-5) Reaffirmed-2010	5% to 60%
		California Bearing Ratio	IS 2720: 1987 (Part-16) Reaffirmed-2011	1% to 50%
II.	BUILDING MATERIALS			
1.	Cement	Consistency	IS 4031: 1988 (Part-4) Reaffirmed-2014	25% to 40%
		Initial Setting Time	IS 4031: 1988 (Part-5) Reaffirmed-2014	30 min to 250 min
		Final Setting Time	IS 4031: 1988 (Part-5) Reaffirmed-2014	100 min to 600 min
		Compressive Strength	IS 4031: 1988 (Part-6) Reaffirmed-2014	10 N/mm ² to 80 N/mm ²
		Fineness by Dry Sieve	IS 4031: 1996 (Part-1) Reaffirmed-2016	1.0 % to 10 %
2.	Hardened Concrete	Compressive Strength	IS 516: 1959 Reaffirmed-2013	10 kN to 2000 kN
3.	Brick Clay / Fly Ash Bricks	Compressive Strength	IS 3495:1992 (Part – 1) Reaffirmed-2016	3.5 N/mm ² to 20 N/ mm ²
		Water Absorption	IS 3495:1992 (Part – 2) Reaffirmed-2016	2 % to 25 %
		Efflorescence	IS 3495:1992 (Part – 3) Reaffirmed-2016	Qualitative
		Dimension	IS 1077:1992 Reaffirmed-2016	L : 3900 mm to 4680 mm W: 1800 mm to 2240 mm H: 1360 mm to 1440 mm

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4.	Fine Aggregates	Sieve Analysis	IS 2386: 1963 (Part-1) Reaffirmed-2016	70 µm to 10mm
		Material Finer Than 75µ	IS 2386: 1963 (Part-1) Reaffirmed-2016	0.10% to 30%
		Bulk Density	IS 2386: 1963 (Part-3) Reaffirmed-2016	1.2 g/cc to 1.8 g/cc
		Specific Gravity	IS 2386: 1963 (Part-3) Reaffirmed-2016	1.5 to 3.0
		Water Absorption	IS 2386: 1963 (Part-3) Reaffirmed-2016	1% to 10%
6.	Concrete Paver Block	Water Absorption	IS 15658: 2006 Reaffirmed-2017	0.5% to 20%
		Compressive Strength	IS 15658: 2006 Reaffirmed-2017	10 kN to 2000 kN
7.	Coarse Aggregates	Specific Gravity	IS 2386:1963 (Part-3) Reaffirmed-2016	2.5 to 3.5
		Water Absorption	IS 2386:1963 (Part-3) Reaffirmed-2016	0.5 % to 10%
		Impact Value	IS 2386: 1963 (Part-4) Reaffirmed-2016	10% to 60%
		Crushing Value	IS 2386: 1963 (Part-4) Reaffirmed-2016	10 % to 50%
		Sieve Analysis	IS 2386:1963 (Part-3) Reaffirmed-2016	4.75 µm to 80 mm
		Loss Angeles Abrasion Value	IS 2386:1963 (Part-4) Reaffirmed-2016	10% to 50%
		Flakiness Index	IS 2386:1963 (Part-1) Reaffirmed-2016	2.0% to 40%
Elongation Index	IS 2386:1963 (Part-1) Reaffirmed-2016	2.0% to 40%		

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iii.	MECHANICAL PROPERTIES OF METALS			
1.	Steel	Mass per meter	IS 1786:2008 Reaffirmed-2013	0.1 kg/m to 9.5 kg/m
		Tensile Strength	IS 1608:2005 Reaffirmed-2017	100 N/mm ² to 800 N/mm ²
		Yield Stress	IS 1608:2005 Reaffirmed-2017	100 N/mm ² to 800 N/mm ²
		Elongation	IS 1608:2005 Reaffirmed-2017	10% to 40%
		Bend Test	IS 1599:2012 Reaffirmed-2017	Qualitative Mandrel Size: (16,20,24, 32,36,40,50,60,80,140, 175,240,280,320) mm

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