

Laboratory **Civil-Tech Consultants & Engineers, No. 23/14, 7th Cross, 3rd Stage, 4th Block, Shakthiganapathinagar, Basaveshwaranagar, Bangalore, Karnataka**

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

Certificate Number **TC-8110 (in lieu of T-2377)**

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Validity **20.11.2018 to 19.11.2020**

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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MECHANICAL TESTING

I.	BUILDING MATERIALS			
1.	Cement	Standard Consistency	IS 4031(Part 4)	24 % to 35 %
		Initial Setting time	IS 4031(Part 5)	30 min to 300 min
		Final Setting time	IS 4031(Part 5)	30 min to 600 min
		Fineness by dry sieving (Residue on 90 Micron Is Sieve)	IS 4031(Part 1)	0.1 % to 10 %
		Soundness by Le Chartier method	IS 4031(Part 3)	0.1 mm to 10 mm
2.	Fine Aggregate	Compressive Strength	IS 4031(Part 6)	10 N/mm ² to 70 N/mm ²
		Sieve Analysis	IS 2386(Part 1)	Upto 100 % (Using IS Sieve of 0.15mm to 10 mm)
		Specific gravity	IS 2386(Part 3)	1.2 to 3
		Water Absorption	IS 2386(Part 3)	0.5 % to 8 %
		Bulk density	IS 2386(Part 3)	1 kg/l to 2 kg/l
3.	Coarse Aggregates	Sieve Analysis	IS 2386(Part 1)	0.1 % to 100 % (Using IS Sieve of 4.75mm to 40 mm)
		Flakiness Index	IS 2386(Part 1)	5 % to 50 %
		Elongation Index	IS 2386(Part 1)	5 % to 50 %
		Specific gravity	IS 2386(Part 3 Method 1)	1.5 to 3.5
		Water absorption	IS 2386(Part 3)	0.2 % to 2 %
		Impact value	IS 2386(Part 4)	5 % to 35 %
		Bulk density	IS 2386(Part 3)	1 kg/l to 2 kg/l
4.	Bitumen	Penetration	IS 1203	30 to 100 (1/10 mm)

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Ductility	IS 1208	30 cm to 100 cm
		Flash point	IS 1209	130 °C to 360 °C
		Fire point	IS 1209	180 °C to 360 °C
		Softening point	IS 1205	30 °C to 80 °C
5.	Bricks	Dimensions (A Set of 20 Bricks) Length Width Depth	IS 1077	4000 mm to 5000 mm 1600 mm to 2200 mm 1200 mm to 1600 mm
		Compressive strength	IS 3495(Part 1)	3 N/mm ² to 20 N/mm ²
		Water absorption	IS 3495(Part 2)	5 % to 30 %
6.	Concrete	Compressive strength of cubes /Cores	IS 516	5 N/mm ² to 40 N/mm ²
7.	Concrete Blocks	Solid Block Density	IS 2185(Part 1)	1000 kg/m ³ to 2500 kg/m ³
		Compressive Strength	IS 2185(Part 1)	3 N/mm ² to 20 N/mm ²
II.	SOIL AND ROCK			
1.	Soil	Moisture Content	IS 2720(Part 2)	5 % to 20 %
		Grain Size Analysis	IS 2720(Part 4)	Upto 100 % (Using IS Sieve 0.075 mm, 0.425 mm, 2.00 mm)
		Liquid Limit	IS 2720(Part 5)	10 % to 80 %
		Plastic Limit	IS 2720(Part 5)	5 % to 40 %
		Light Compaction MDD OMC	IS 2720(Part 7)	1.5 g/cc to 1.85 g/cc 5 % to 30 %
		Heavy Compaction MDD OMC	IS 2720(Part 8)	1.3 g/cc to 1.90 g/cc 5 % to 30 %
		Free Swell Index	IS 2720(Part 40)	5 % to 100 %

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