

Laboratory National Engineering Consultants & Testing Laboratory, Plot No. 27-28, Shiv Vihar Extn., Uttam Nagar, New Delhi

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7436 **Page 1 of 2**

Validity 22.06.2018 to 21.06.2020 **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.	Coarse Aggregate	Sieve Analysis	IS 2386 (Part 1)	0 % to 100 % (4.75 mm to 125 mm)
		Impact Value	IS 2386 (Part 4)	5 % to 60 %
		Crushing Value	IS 2386 (Part 4)	5 % to 60 %
		Water Absorption	IS 2386 (Part 3)	0.1 % to 25 %
		Specific Gravity	IS 2386 (Part 3)	1.0 to 3.0
		Bulk Density	IS 2386 (Part 3)	1.0 kg/L to 2.0 kg/L
		Flakiness Index	IS 2386 (Part 1)	1.0 % to 60.0 %
		Elongation Index	IS 2386 (Part 3)	1.0 % to 60.0 %
2.	Fine Aggregate	Sieve Analysis	IS 2386 (Part 1)	0 % to 100 % (75 µm to 4.75 mm)
		Water Absorption	IS 2386 (Part 3)	0.1 % to 25 %
		Bulk Density	IS 2386 (Part 3)	1.0 kg/L to 2.0 kg/L
		Specific Gravity	IS 2386 (Part 3)	1.0 to 3.0
3.	Bricks	Dimension Length	IS 1077	Upto 5000 mm
		Dimension Width	IS 1077	Upto 3000 mm
		Dimension Height	IS 1077	Upto 2000 mm
		Compressive Strength	IS 3495 (Part 1)	5 N/mm ² to 45 N/mm ²
		Water Absorption	IS 3495 (Part 2)	0.5 % to 40 %
		Efflorescence	IS 3495 (Part 3)	Qualitative
4.	Cement Concrete Cube	Compressive Strength	IS 516	5 N/mm ² to 80 N/mm ²
5.	Paver Block	Compressive Strength	IS 15658	5 N/mm ² to 80 N/mm ²
		Water Absorption		2 % to 15 %
6.	Cement	Fineness		200 m ² /kg to 500 m ² /kg
		Blain Air Permeability	IS 4031 (Part 2)	0.05 % to 20 %
		Dry Sieving	IS 4031 (Part 1)	20 % to 40 %
		Consistency	IS 4031 (Part 4)	
		Soundness		
		By Le-Chatlier Method	IS 4031 (Part 3)	0.1 mm to 20 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
		By Autoclave Method	IS 4031 (Part 3)	0.01% to 5.0 %
		Initial Setting Time	IS 4031 (Part 5)	30 minute to 300 minute
		Final Setting Time	IS 4031 (Part 5)	30 minute to 650 minute
		Compressive Strength	IS 4031 (Part 6)	10 N/mm ² to 70 N/mm ²
7.	Bitumen	Penetration	IS 1203	1 unit to 100 unit (0.1 mm)
		Softening Point	IS 1205	15 °C to 60 °C
8.	Bitumen Mix	Bitumen Content	IRC SP 11	1 % to 15 %
		Density of Bituminous Mixture (Core)	ASTM D 2726	1.5 g/cc to 3.00 g/cc
II.	SOIL AND ROCK			
1.	Soil	Grain Size Analysis	IS 2720 (Part 4) Clause 3 Clause 4	0 % to 100 % (4.75 mm to 75 mm) (0.075 mm to 4.75mm)
		Light Compaction	IS 2720 (Part 7) Clause 5	MDD 1.0 g/cc to 3.0 g/cc OMC 1.0 % to 20 %
		Heavy Compaction	IS 2720 (Part 8) Clause 5	MDD 1.0 g/cc to 3.0 g/cc OMC 1.0 % to 20 %
		Liquid Limit	IS 2720 (Part 5)	0.5 % to 50 %
		Plastic Limit	IS 2720 (Part 5)	0 % to 50 %
		Plasticity Index	IS 2720 (Part 5)	0.5 to 50
		California Bearing Ratio Value	IS 2720 (Part 16)	1 % to 60 %