

Laboratory

Universal Testing Lab, Unit No. 17, Laxmi Industrial Estate C.H.S.,
Laxmi Nagar, Off Link Road, Goregaon (West), Mumbai, Maharashtra

Location 1: Unit No. 17, Laxmi Industrial Estate C.H.S., Laxmi Nagar, Off Link
Road, Goregaon (West), Mumbai, Maharashtra

Location 2: Unit No. 12, C Wing, Vasupujya Estate Premises Co- Op Soc. Ltd.,
Goregaon (West), Mumbai, Maharashtra

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6047 (in lieu of T-3376 & T-3377)

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Validity 24.04.2017 to 23.04.2019

Last Amended on 01.08.2017

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

LOCATION 1				
I.	BUILDINGS MATERIALS			
1.	Coarse Aggregate	Sieve Analysis	IS 2386 (Part 1)	4.75 mm to 40 mm
		Specific Gravity	IS 2386 (Part 3)	2 to 4
		Water Absorption	IS 2386 (Part 3)	0.1 % to 10 %
		Bulk Density (Loose & Rodded)	IS 2386 (Part 3)	1 kg/L to 2 kg/L
		Impact Value	IS 2386 (Part 4)	2 % to 50 %
		Crushing Value	IS 2386 (Part 4)	2 % to 50 %
		Elongation Index	IS 2386 (Part 1)	1 % to 50 %
		Flakiness Index	IS 2386 (Part 1)	1 % to 50 %
		Abrasion Value	IS 2386 (Part 4)	5 % to 50 %
2.	Fine Aggregate	Sieve Analysis	IS 2386 (Part 1)	75 µm to 4.75 mm
		Specific Gravity	IS 2386 (Part 3)	1 to 4
		Water Absorption	IS 2386 (Part 3)	1 % to 50 %
		Bulk Density (Loose & Rodded)	IS 2386 (Part 3)	1 kg/L to 2 kg/L
		Material Finer than 75µm	IS 2386 (Part 1)	1 % to 30 %
3.	Concrete	Compressive Strength of cube	IS 516 IS 456	5 N/mm ² to 120 N/mm ²
		Compressive Strength of core / cylinder	IS 516 IS 456	5 N/mm ² to 120 N/mm ²
		Flexural Strength	IS 516	1 N/mm ² to 10 N/mm ²
		Accelerated testing by boiling water method	IS 9013	5 N/mm ² to 80 N/mm ²

Nikhil Kumar
Convenor

N. Venkateswaran
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4.	Autoclaved Cellular Aerated Concrete Block	Compressive Strength	IS 6441 (Part 5)	0.5 N/mm ² to 15 N/mm ²
		Density of Block	IS 6441 (Part 1)	400 kg/m ³ to 2000 kg/m ³
		Moisture Content	IS 6441 (Part 1)	1 % to 25 %
		Drying Shrinkage	IS 6441 (Part 2)	0.01 % to 1 %
5.	Cement	Normal Consistency	IS 4031 (Part 4)	25 % to 40 %
		Initial Setting Time	IS 4031 (Part 5)	30 minute to 400 minute
		Final Setting Time	IS 4031 (Part 5)	90 minute to 480 minute
		Soundness by Le-Chatelier	IS 4031 (Part 3)	0.5 mm to 10 mm
		Fineness by sieving	IS 4031 (Part 1)	1 % to 20 %
		Compressive Strength	IS 4031 (Part 6)	5 N/mm ² to 85 N/mm ²
		Specific Gravity	IS 4031(Part 11)	2 to 4
6.	Fly Ash	Fineness by sieving	IS 1727	5 % to 40 %
		Soundness by Le-chatelier	IS 1727	0.1 % to 10 %
		Initial Setting Time	IS 1727	10 minute to 300 minute
		Final Setting Time	IS 1727	100 minute to 400 minute
		Compressive Strength	IS 1727	5 N/mm ² to 80 N/mm ²
		Specific Gravity	IS 1727	1 to 3
7.	Paver Block	Compressive Strength	IS 15658	10 N/mm ² to 80 N/mm ²
		Water Absorption	IS 15658	1 % to 25 %
8.	Bricks (Pulverized Fuel Ash Bricks)	Compressive Strength	IS 3495	1 N/mm ² to 35 N/mm ²
		Water Absorption	IS 3495	1 % to 50 %
		Efflorescence	IS 3495	Qualitative
9.	Bricks (Common Burnt Clay Building Bricks)	Compressive Strength	IS 3495	1 N/mm ² to 35 N/mm ²
		Water Absorption	IS 3495	1 % to 50 %
		Efflorescence	IS 3495	Qualitative

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II.	MECHANICAL PROPERTIES OF MATERIALS			
1.	Ferrous Materials (High Strength Deformed Steel Bar)	Weight per Meter	IS 1786	0.1 kg/m to 10 kg/m
% Elongation		IS 1608	1 % to 40 %	
0.2% Proof/ Yield Stress		IS 1608	100 MPa to 1000 MPa	
Ultimate Tensile Strength			100 MPa to 900 MPa	
Bend		IS 1599	Qualitative (Mandrel Diameter: 16 mm to 240 mm)	
	Rebend	IS 1786	Qualitative (Mandrel Diameter : 16 mm to 240 mm)	

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LOCATION 2				
I.	BUILDINGS MATERIALS			
1.	Bitumen	Softening Point	IS 1205	25 °C to 100 °C
		Penetration	IS 1203	1 mm to 95 mm
		Marshall Stability	ASTM D1559-89	1 kN to 20 kN
		Specific Gravity	IS 1202	0.5 to 1.5
		Bitumen Content	ASTM D2172/D2172M-11	1 % to 10 %
		Flow Value	ASTM D1559-89	1 mm to 10 mm
II.	SOIL & ROCK			
1.	Soil	Liquid Limit	IS 2720 (Part 5)	15 % to 160 %
		Plastic Limit	IS 2720 (Part 5)	15 % to 50 %
		Moisture Content	IS 2720 (Part 2)	1 % to 50 %
		Grain Size Analysis	IS 2720 (Part 4)	75 µm to 19 mm
		Light Compaction OMC MDD	IS 2720 (Part 7)	5 % to 30 % 1.5 g/cc to 2.5 g/cc
		Heavy Compaction OMC MDD	IS 2720 (Part 8)	5 % to 30 % 1.5 g/cc to 2.5 g/cc
		C.B.R (California Bearing Ratio)	IS 2720 (Part 16)	1 % to 80 %
		Specific Gravity	IS 2720 (Part 3)	2.0 to 3.0
2.	Rock	Unconfined Compressive Strength	IS 9143	10 kg/cm ² to 2500 kg/cm ²
		Density	IS 13030	1.5 g/cc to 2.5 g/cc
		Water Absorption	IS 13030	0.1 % to 25 %
		Porosity	IS 13030	0.02 % to 20 %
		Specific Gravity	IS 13030	1 to 4

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NON-DESTRUCTIVE TESTING

LOCATION 1				
I.	BUILDING MATERIALS- REINFORCED CONCRETE STRUCTURES			
1.	Reinforced Concrete Structures	Rebound Hammer	IS 13311 (Part 2)	10 R to 80 R
		Ultrasonic Pulse Velocity	IS 13311 (Part 1)	1.0 km/s to 5.0 km/s
		Cover Meter	BS 1881 (Part 204)	1 mm to 85 mm
		Carbonation	DIN EN 14630	Qualitative
		Half Cell Potentiometer	ASTM C876-09	(-)100 mV to (-) 650 mV

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