

Laboratory **Nitya Laboratories, 118, Bhagat Singh Colony, Ballabhgarh, Faridabad, Haryana**

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

Certificate Number **TC-6848**

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Validity **30.01.2018 to 29.01.2020**

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.	SOIL AND ROCK			
1.	Soil	Grain size Analysis	IS 2720 (Part 4): 1985 (RA 2007)	75 µm to 10 mm
		Liquid Limit	IS 2720 (Part 5): 1985 (RA 2001)	20 % to 80 %
		Plastic Limit	IS 2720 (Part 5): 1985 (RA 2001)	10 % to 40 %
		Free Swell Index	IS 2720 (Part 40): 1977 (RA 1997)	1 % to 90 %
		Specific Gravity	IS 2720 (Part 3 & Sec-1 & 2): 1980 (RA 2007) Rev. 1	2.0 to 2.90
		Shrinkage Limit	IS 2720 (Part 6): 1972 (RA 2001) Rev. 1 & Amd. 1	1 % to 50 %
		Light Compaction	IS 2720 (Part 7): 1980 (RA 2007) Rev. 2 & Amd. 2	MDD: 1.0 g/cc to 3.00 g/cc OMC: 1 % to 25 %
		Heavy Compaction	IS 2720 (Part 8): 1983 (RA 2001) Rev. 2	MDD: 1.0 g/cc to 3.00 g/cc OMC: 1 % to 20 %
		CBR	IS 2720 (Part 16): 1987 (RA 2007) Rev. 2	1 % to 30 %
II.	BUILDING MATERIALS			
1.	Fine Aggregate	Sieve Analysis	IS 2386 (Part 1): 1963 (RA 2007)	75 µm to 10 mm
		Specific Gravity	IS 2386 (Part 3): 1963 (RA 2007)	1.00 to 3.00
		Water Absorption	IS 2386 (Part 3): 1963 (RA 2007)	1.0 % to 8.0 %
		Bulk Density	IS 2386 (Part 3): 1963 (RA 2007)	1 g/cc to 3 g/cc

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		Finer than 75 micron	IS 2386 (Part 1): 1963 (RA 2007)	0.10 % to 15 %
2.	Coarse Aggergate	Sieve Analysis	IS 2386 (Part 1): 1963 (RA 2007)	80 mm to 2.36 mm
		Specific Gravity	IS 2386 (Part 3): 1963 (RA 2007)	1.00 % to 3.00 %
		Water Absorption	IS 2386 (Part 3): 1963 (RA 2007)	0.10 % to 5.00 %
		Flakiness Index	IS 2386 (Part 1): 1963 (RA 2007)	1 % to 40 %
		Elongation Index	IS 2386 (Part 1): 1963 (RA 2007)	1 % to 40 %
		Impact Value	IS 2386 (Part 4): 1963 (RA 2007)	1 % to 50 %
		Crushing Value	IS 2386 (Part 4): 1963 (RA 2007)	1 % to 50 %
3.	Cement	Consistency	IS 2386 (Part 4): 1963 (RA 2007)	20 % to 40 %
		Initial Setting Time	IS 4031 (Part 5): 1988 (RA 2014)	30 min. to 350 min.
		Final Setting Time	IS 4031 (Part 5): 1988 (RA 2014)	150 min. to 600 min.
		Fineness by Blaine Air Permeability	IS 4031 (Part 2): 1999 (RA 2014)	100 m ² /kg to 700 m ² /kg
		Soundness by Le-Chatelier	IS 4031 (Part 3): 1988 (RA 2014)	0.5 mm to 10 mm
		Compressive Strength	IS 4031 (Part 6) (RA 2014)	1 N/mm ² to 80 N/mm ²
		Density	IS 4031 (Part 11): 1988 (RA 1995)	3.0 g/cc to 3.5 g/cc
4.	Concrete Cubes	Compressive Strength	IS 516:1959 (RA 2004) Amd. 2	1 N/mm ² to 80 N/mm ²
5.	Bricks (Burnt Clay)	Dimension	IS 1077:1992 IS 13757:1993 Amd. 1	Width: 100 mm to 150 mm Length: 200 mm to 300 mm Height: 70 mm to 100 mm

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		Water Absorption	IS 3495 (Part 2): 1992 (RA 2007) Rev. 3	1 % to 40 %
		Compressive Strength	IS 3495 (Part 1): 1992 (RA 2007) Rev. 3	1 N/mm ² to 20 N/mm ²
		Efflorescence	IS 3495 (Part 3): 1992 (RA 2007) Rev. 3	Qualitative
III.	MECHANICAL PROPERTIES OF METALS			
1.	Reinforcement Steel	Ultimate Tensile Strength	IS 1608:2005 (RA 2006) Rev. 3	50 N/mm ² to 700 N/mm ²
		Yield Stress	IS 1608:2005 (RA 2006) Rev. 3	50 N/mm ² to 700 N/mm ²
		Elongation	IS 1608:2005 (RA 2006) Rev. 3	8 % to 35 %
		Bend Test	IS1599:2012 Rev. 3	(Mandrel Size: 24, 30, 36, 40, 60, 75, 80, 84, 96 & 100) mm
		Re-bend	IS 1786:2008 Rev. 4	(Mandrel Size: 40, 50, 84, 112, 140, 175 & 224) mm
		Weight/meter	IS 1786:2008 Rev. 4	0.3 kg/m to 8 kg/m