

Laboratory	Ashoka Highway Research Centre, Gut No. 13/22, At Sarul, Post Viholi, Jategaon Road Viholi-NH3, Nashik, Maharashtra		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	19.12.2014
Certificate Number	T-3247	Valid Until	18.12.2016
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I. SOIL AND ROCK				
1.	Soil	Grain Size Analysis Gravel Sand Silt	IS 2720 (Part 4): 1985	75 Micron to 100 mm
		Atterberg's Limit LL PL PI	IS 2720 (Part 5): 1985	0.5 % to 80 %
		California Bearing Ratio (CBR)	IS 2720 (Part 16): 1987	01 % to 100 %
		Heavy Compaction MDD (Proctor Test) OMC	IS 2720 (Part 8): 1983	0.5 g/cc to 3.0 g/cc 0 to 30 %
		Free Swell Index	IS 2720 (Part 40): 1977	5 % to 100 %
II. BUILDING MATERIALS				
1.	Aggregates (Coarse Aggregate)	Grading (Sieve Analysis)	IS 2386 (Part 1): 1963	0.1 % to 100 %
		Unit Weight & Voids (Bulk Density) of Coarse Aggregate	IS 2386 (Part 3): 1963	1.0 g/cc to 3 g/cc
		Soundness Test of Coarse Aggregate	IS 2386 (Part 5): 1963	0.5 % to 40 %
		Impact Value	IS 2386 (Part 4): 1963	5 % to 50 %

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	Aggregates (Coarse Aggregate)	Crushing Value	IS 2386 (Part 4): 1963	5 % to 50%
		10 % Fines Value	IS 2386 (Part 3 & Part 4): 1963 BS 812 EN 1097-8 .2009	Upto 500 kN
		Specific Gravity	IS 2386 (Part 3): 1963	1 to 3.5
		Water Absorption Test	IS 2386 (Part 3):1963	Upto 10 %
		Flakiness Index	IS 2386 (Part 1): 1963	Upto 50 %
		Elongation Index	IS 2386 (Part 1): 1963	Upto 50 %
		Stripping Value Test	IS 6241 (Part 3): 1971	Upto 100 %
2.	Aggregates (Fine Aggregate)	Grading (Sieve Analysis)	IS 2386 (Part 1): 1963	0.1 % to 100 %
		Unit Weight & Voids (Bulk Density)	IS 2386 (Part 3): 1963	1 to 3g/cc
		Soundness Test of Fine Aggregate	IS 2386 (Part 5):1963	0.5 % to 40 %
		Specific Gravity	IS 2386 (Part 3): 1963	1.0 to 3.5
		Water Absorption Test	IS 2386 (Part 3): 1963	Upto 10 %
3.	Bitumen	Softening point	IS 1205: 1978	30 ⁰ C to 100 ⁰ C
		Penetration Test	IS 1203: 1978	10 mm to 300 mm
		Ductility	IS 1208: 1978	30 cm to 100 cm

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	Bitumen	Kinematic Viscosity	IS 1206 (Part 3): 1978 ASTM-D-4402-02	50 cSt to 750 cSt
		Specific Gravity	IS 1202: 1978	0.50 to 1.50
		Elastic Recovery	IS 15462: 2004 Annex-A IRC SP 53-2010 Annex-2	10 % to 100 %
4.	Bitumen Emulsion	Residue by Evaporation	IS 8887: 2004, Annex J	0 to 100 %
		Viscosity by Saybolt Furol	IS 3117: 2009	1 s to 300 s
5.	Bituminous Mix	Marshall Stability	AASHTO T245-2004 ASTM D 6927-06	Upto 50 kN
		Bulk Specific Gravity	IRC: 111-2009, A	1 to 3
		Theoretical Maximum Specific Gravity	IRC:111-2009, Annex-B ASTM D 2041	1 to 3
		Marshall Flow	AASHTO T245	1 mm to 10 mm
		Marshall Stability Retained	ASTMD 1075	50 % to 100 %
6.	Cement -OPC	Consistency by Vicat Apparatus	IS 4031 (Part 4): 1988	10 % to 40 %
		Setting Time by Vicat Apparatus Initial Final	IS 4031 (Part 5): 1988	10 Min to 300 Min 60 Min to 600 Min
		Compressive Strength 3 Days 7 Days 28 Days	IS 4031 (Part 6): 1988	10 Mpa to 50 Mpa 10 Mpa to 50 Mpa 10 Mpa to 75 Mpa

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	Cement -OPC	Soundness Testing by Le-Chatelier's method	IS 4031 (Part 3): 1988	Upto 15 mm
		Fineness by sieving	IS 4031 (Part 1): 2000	Upto 30 %
7.	Concrete Cubes	Compressive Strength	IS 516: 1959 Cl. 5	5 Mpa to 80 Mpa

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