

Laboratory                      **Geo Test House – A Division of Geo Designs & Research Pvt. Ltd.,  
Plot No. 10, Valmikinagar, Lotus Colony, Bhuj-Kutch, Gujarat**

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

Certificate Number        **TC-6974 (in lieu of T-3354, T-2830)**                      **Page 1 of 4**

Validity                        **11.02.2018 to 10.02.2020**                      **Last Amended on 05.03.2018**

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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**CHEMICAL TESTING**

I.	WATER			
1.	Construction Water	pH	IS 3025 (Part 11)	1 to 14
		Chloride	IS 3025 (Part 32) [Argentometric Method (Titration)]	1 mg/l to 25000 mg/l
		Sulphate	IS 3025 (Part 24) (Gravimetric Method)	10 mg/l to 25000 mg/l

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**MECHANICAL TESTING**

<b>I.</b>	<b>BUILDING MATERIALS</b>			
<b>1.</b>	<b>Bricks</b>	Compressive Strength	IS 3495 (Part 1)	2 N/mm <sup>2</sup> to 15 N/mm <sup>2</sup>
		Water Absorption	IS 3495 (Part 2)	5 % to 30 %
		Dimensions: Length	IS 1077	2000 mm to 5000 mm
		Dimensions: Width		1600 mm to 2500 mm
		Dimensions: Height		1200 mm to 2300 mm
<b>2.</b>	<b>Concrete</b>	Efflorescence	IS 3495 (Part 3)	Qualitative
		Compressive Strength of Hardened Concrete	IS 516	5 N/mm <sup>2</sup> to 80 N/mm <sup>2</sup>
<b>3.</b>	<b>Bitumen</b>	Workability of Fresh Concrete (Slump)	IS 1199	10 mm to 250 mm
		Penetration	IS 1203	15 to 100
<b>4.</b>	<b>Bituminous Mix</b>	Softening Point	IS 1205	10 °C to 100 °C
		Ductility	IS 1208	25 cm to 100 cm
		Absolute Viscosity	IS 1206 (Part 2)	360 poises to 360 poises
		Kinematic Viscosity	IS 1206 (Part 2)	100 cSt to 600 cSt
		Marshall Stability	ASTM D D6927	1 kN to 30 kN
<b>5.</b>	<b>Cement (OPC/ PPC)</b>	Flow	ASTM D D6927	1 mm to 10 mm
		Standard Consistency	IS 4031 (Part 4)	15 % to 45 %
		Initial Setting Time	IS 4031 (Part 5)	30 minutes to 300 minutes
		Final Setting Time	IS 4031 (Part 5)	150 minutes to 700 minutes
		Compressive Strength	IS 4031 (Part 6)	10 N/mm <sup>2</sup> to 70 N/mm <sup>2</sup>
		Fineness by Blain's Air Permeability	IS 4031 (Part 2)	150 m <sup>2</sup> /kg to 450 m <sup>2</sup> /kg
		Soundness by Le-Chatelier	IS 4031 (Part 3)	0.2 mm to 10 mm
Density (Specific Gravity)	IS 4031 (Part 11)	2.5 to 3.5		

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6.	<b>Fine Aggregates</b>	Size and Grading	IS 2386 (Part 1)	10 mm to 150 µm (0 % to 100 %)
		Specific Gravity	IS 2386 (Part 3)	1.5 to 3.5
		Water Absorption	IS 2386 (Part 3)	0.5 % to 10 %
7.	<b>Coarse Aggregates</b>	Size and Grading	IS 2386 (Part 1)	80 mm to 4.75 mm (0 % to 100 %)
		Specific Gravity	IS 2386 (Part 3)	1.5 to 3.5
		Water Absorption	IS 2386 (Part 3)	0.5 % to 10 %
		Flakiness Index	IS 2386 (Part 1) (Clause 4)	5 % to 70 %
		Elongation Index	IS 2386 (Part 1) (Clause 5)	5 % to 70 %
		Impact Value	IS 2386 (Part 4) (Clause 4)	5 % to 60 %
		10 Percent Fines	IS 2386 (Part 4) (Clause 3)	50 kN to 400 kN
<b>II.</b>	<b>Soil &amp; Rock</b>			
1.	<b>Soil</b>	Grain Size Analysis (Wet Analysis)	IS 2720 (Part 4)	4.75 mm to 0.075 mm (0 % to 100 %)
		Liquid Limit	IS 2720 (Part 5)	15 % to 400 %
		Plastic Limit	IS 2720 (Part 5)	10 % to 200 %
		Light Compaction Maximum Dry Density Optimum Moisture Content	IS 2720 (Part 7)	1 g/cm <sup>3</sup> to 3 g/cm <sup>3</sup> 5 % to 30 %
		Heavy Compaction Maximum Dry Density Optimum Moisture Content	IS 2720 (Part 8)	1.5 g/cm <sup>3</sup> to 3 g/cm <sup>3</sup> 5 % to 25 %
		California Bearing Ratio	IS 2720 (Part 16)	1 % to 80 %
		<b>III.</b>	<b>MECHANICAL PROPERTIES OF MATERIALS</b>	
1.	<b>High Strength Deformed Steel Bars</b>	Ultimate Tensile Stress	IS 1608	200 N/mm <sup>2</sup> to 900 N/mm <sup>2</sup>

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		Yield Stress	IS 1608	200 N/mm <sup>2</sup> to 800 N/mm <sup>2</sup>
		Elongation	IS 1608	5 % to 40 %
		Mass per Meter	IS 1786	0.1 kg/m to 30 kg/m