

**Laboratory** Shree Hari Testing And Consultancy, 254/1BB, Bhurvav, Lunawada Road, Godhra, Gujarat  
**Accreditation Standard** ISO/IEC 17025: 2005  
**Certificate Number** TC-5896 **Page 1 of 4**  
**Validity** 30.06.2017 to 29.06.2019 **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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**CHEMICAL TESTING**

I.	WATER			
1.	Construction & Drinking Purpose	pH	IS 3025 (Part 11) : 1983 (RA.2012)	2 to 14
		Chloride	IS 3025 (Part 32) : 1988 (RA 2014) (Argentometric Method (Titration))	1 mg/l to 25000 mg/l
		Sulphate	IS 3025 (Part 24): 1986 (RA.2014) (Gravimetric Method)	10 mg/l to 25000 mg/l

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Convener

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N. Venkateswaran  
Program Director

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<b><u>MECHANICAL TESTING</u></b>				
<b>I.</b>	<b>BUILDING MATERIALS</b>			
<b>1.</b>	<b>HSDS Steel Bars (Reinforcement Steel)</b>	Ultimate Tensile Stress	IS 1608 : 2005 (RA.2011)	150 N/mm <sup>2</sup> to 550 N/mm <sup>2</sup>
		Yield stress	IS 1608 : 2005 (RA.2011)	100 N/mm <sup>2</sup> to 550 N/mm <sup>2</sup>
		Elongation	IS 1608 : 2005 (RA.2011)	5 % to 40 %
		Mass per Meter	IS 1786 : 2008 (RA.2013)	0.1 kg/m to 5 kg/m
<b>2.</b>	<b>Bricks</b>	Compressive Strength	IS 3495 (Part 1): 1992 (RA. 2011)	2.5 N/mm <sup>2</sup> to 35 N/mm <sup>2</sup>
		Water Absorption	IS 3495 (Part 2): 1992 (RA. 2011)	5 % to 30 %
		<b>Dimension (20 Bricks )</b> Length Width Height	IS 1077 : 1992 (RA.2011)	2000 mm to 5000 mm
				1600mm to 2500 mm
				1200mm to 2300 mm
Efflorescence	IS 3495 (Part 3) : 1992 (RA. 2011) (By Visual)	Qualitative		
<b>3.</b>	<b>Concrete</b>	Compressive Strength of Hardened Concrete	IS 516: 1959 (RA. 2013)	5 N/mm <sup>2</sup> to 80 N/mm <sup>2</sup>
		Workability of Fresh Concrete (Slump)	IS 1199 : 1959 (RA.2013)	5 mm to 250 mm
<b>4.</b>	<b>Bitumen</b>	Ductility	IS 1208: 1978 (RA: 2009)	10 cm to 100 cm
		Softening Point	IS 1205: 1978 (RA: 2009)	30 °C to 150 °C
		Penetration	IS 1203 : 1978 (RA: 2009)	5 mm to 400 mm
		Kinematic Viscosity	IS 1206 (Part-3): 1978 (RA: 2009)	100 cSt to 550 cSt
		Absolute Viscosity	IS 1206 (Part-2): 1978 (RA: 2009)	360 poises to 3000 poises
		Specific Gravity	IS 1202 : 1978	0.5 to 1.8
<b>5.</b>	<b>Bituminous Mix</b>	Marshall Stability	ASTM D6927 - 15	1 kN to 30 kN
		Flow	ASTM D6927 - 15	1 mm to 25 mm
		Bitumen Content	IRC : SP 11 Appendix - C	0.1% to 15 %

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6.	Cement	Standard Consistency	IS 4031 (Part 4) : 1988 (RA.2014)	10 % to 50 %
		Initial Setting Time	IS 4031 (Part 5) : 1988 (RA.2014)	10 min to 300 min
		Final Setting Time	IS 4031 (Part 5) : 1988 (RA.2014)	60 min to 600 min
		Compressive Strength	IS 4031 (Part 6) : 1988 (RA.2014)	10 N/mm <sup>2</sup> to 100 N/mm <sup>2</sup>
		Fineness by Blain's Air Permeability	IS 4031 (Part 2) : 1999 (RA.2013)	10 m <sup>2</sup> /kg to 400 m <sup>2</sup> /kg
		Soundness by Lechatlier	IS 4031 (Part 3) : 1988 (RA.2014)	0.5 mm to 20 mm
		Density	IS 4031 (Part 11) : 1988(Rf.2014)	2.5 g/cm <sup>3</sup> to 3.5 g/cm <sup>3</sup>
7.	Aggregates (Fine)	Size and Grading	IS 2386 (Part 1) : 1963 (RA. 2011)	0.075 mm to 4.75 mm
		Specific Gravity	IS 2386 (Part 3) : 1963 (RA. 2011)	1.5 to 3.5
		Water Absorption	IS 2386 (Part 3) : 1963 (RA. 2011)	0.1% to 10 %
8.	Aggregates (Coarse)	Size and Grading	IS 2386 (Part 1) : 1963 (RA. 2011)	4.75mm to 80mm
		Specific Gravity	IS 2386 (Part 3) : 1963 (RA. 2011)	1.5 to 3.5
		Water Absorption	IS 2386 (Part 3) : 1963 (RA. 2011)	0.1 % to 10 %
		Flakiness	IS 2386 (Part 1) : 1963 (RA. 2011)	5 % to 70 %
		Elongation	IS 2386 (Part 1) : 1963 (RA: 2011)	5 % to 70 %
		Impact Value	IS 2386 (Part 4) : 1963 (RA: 2002)	5 % to 60 %
		Crushing Value	IS 2386 (Part 4) : 1963 (RA: 2002)	5 % to 60 %
		Abrasion	IS 2386 (Part 4) : 1963 (RA: 2002)	5 % to 60 %

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		10 % Fine Value	IS 2386 (Part 4) : 1963 (RA: 2002)	50 kN to 400 kN
<b>II.</b>	<b>SOIL &amp; ROCK</b>			
<b>1.</b>	<b>Soil</b>	Sieve analysis by Wet sieving	IS 2720 (Part – 4) : 1985 (RA. 2010)	75 micron to 80 mm
		Liquid Limit	IS 2720 (Part 5) : 1985 (RA.2010)	0 % to 400 %
		Plastic Limit	IS 2720 (Part 5) : 1985 (RA.2010)	0 % to 200 %
		Plastic Index	IS 2720 (Part 5) : 1985 (RA.2010)	0 % to 200 %
		Light Compaction	IS 2720 (Part 7) : 1980 (RA 2011)	MDD: 1 to 3 g/cc OMC: 5 to 30%
		Heavy Compaction	IS 2720 (Part 8) : 1983 (RA. 2010)	MDD: 1 to 3 g/cc OMC: 5 to 25%
		California Bearing Ratio	IS 2720 (Part 16) : 1987 (RA.2011)	1% to 80 %
		Moisture Content	IS 2720 (Part 2) : 1973 (RA: 2010)	0 % to 50 %
		Specific Gravity	IS 2720 (Part 3) : 1980(Rf.2011)	1.0 to 5.0

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