Road, Bhavnagar, Gujarat

Accreditation Standard ISO/IEC 17025: 2005

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are	Range of Testing / Limits of Detection
			performed	

CHEMICAL TESTING

I.	WATER			
1	Water (For Construction	pH	IS 3025 (Part – 11) : 1983 (RA.2017)	1.0 to 14.0
	Purpose)	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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Test Method Specification Range of Testing /

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SI. Product / Material Specific Test

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of Test	Performed	against which tests are performed	Limits of Detection
	MECHAN	IICAL TESTING	
MECHANICAL PRO	PERTIES OF METALS		
Steel HSDS Bars	Ultimate Tensile Strength	IS 1608 : 2005 (RA.2017)	100 kN to 1000 kN
	Yield Strength	IS 1608 : 2005 (RA.2017)	100 kN to 1000 kN
	Elongation	IS 1608 : 2005 (RA.2017)	5% to 40%
	Mass per Meter	IS 1786 : 2008 (RA.2013)	0.08 kg/m to 11 kg/m
BUILDING MATERIA	ÁL		
Bricks	Compressive Strength	IS 3495 (Part - 1) : 1992 (RA. 2016)	2 N/mm ² to 30 N/mm ²
	Water Absorption	(RA. 2016)	1 % to 30 %
	Dimension	IS 1077 : 1992 (RA.2016)	Length=2000 mm to 5000 mm
			Width= 1600 mm to 2500 mm
			Height= 1200 mm to 2300 mm
	Efflorences	IS 3495 (Part - 3) : 1992 (RA. 2016)	Qualitative
Concrete	Compressive Strength of Hardened Concrete	IS 516 : 1959 (RA. 2013)	5 N/mm ² to 80 N/mm ²
	Workability of Fresh Concrete (Slump)	IS 1199 : 1959 (RA.2013)	10 mm to 250 mm
Bitumen	Penetration	IS 1203 : 1978 (RA.2014)	15 to 100 (1/10mm)
	Softening Point	IS 1205 : 1978 (RA.2014)	10 °C to 100 °C
	Ductility	IS 1208 : 1978 (RA.2014)	25 cm to 100 cm
	MECHANICAL PRO Steel HSDS Bars BUILDING MATERI Bricks Concrete	MECHANICAL PROPERTIES OF METALS Steel HSDS Bars Ultimate Tensile Strength Yield Strength Elongation Mass per Meter BUILDING MATERIAL Bricks Compressive Strength Water Absorption Dimension Efflorences Concrete Compressive Strength of Hardened Concrete Workability of Fresh Concrete (Slump) Bitumen Penetration Softening Point	MECHANICAL PROPERTIES OF METALS

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
4.	Cement (OPC, PPC)	Standard Consistency	IS 4031 (Part - 4) : 1988 (RA.2014)	15% to 45 %
		Initial Setting Time	IS 4031 (Part - 5) : 1988 (RA.2014)	30 Minutes to 300 Minutes
		Final Setting Time	IS 4031 (Part - 5) : 1988 (RA.2014)	100 Minutes to 700 Minutes
		Compressive Strength	IS 4031 (Part - 6) : 1988 (RA.2014)	5 N/mm ² to 70 N/mm ²
		Fineness by Blain's Air Permeability	IS 4031 (Part - 2) : 1999 (RA.2013)	150 m ² /Kg to 450 m ² /Kg
		Soundness by Lechatlier	IS 4031 (Part - 3) : 1988 (RA.2014)	0.2 mm to 10 mm
		Density	IS 4031 (Part - 11) : 1988 (RA.2014)	2.5 g/cc to 3.5 g/cc
5.	Aggregates (Fine)	Sieve Analysis	IS 2386 (Part - 1) : 1963 (RA. 2016)	10 mm to 150 micron (0 to 100 %)
		Specific Gravity	IS 2386 (Part - 3) : 1963 (RA. 2016)	1.5 to 3.5
		Water Absorption	IS 2386 (Part - 3) : 1963 (RA. 2016)	0.5 %to 10 %
6.	Aggregates (Coarse)	Sieve Analysis	IS 2386 (Part - 1) : 1963 (RA. 2016)	80 mm to 4.75 mm (0 to 100 %)
		Specific Gravity	IS 2386 (Part - 3) : 1963 (RA. 2016)	1.5 to 3.5
		Water Absorption	IS 2386 (Part - 3) : 1963 (RA. 2016)	0.1% to 10 %
		Flakiness Index	IS 2386 (Part - 1) : 1963(RA.2016) CI.4.0	1 % to 70 %
		Elongation Index	IS 2386 (Part - 1) : 1963(RA.2016) CI.5.0	1 % to 70 %
		Impact Value	IS 2386 (Part - 4) : 1963 (RA.2016) Cl.4.0	5% to 60 %
		10 Percent Fines	IS 2386 (Part - 4) : 1963(RA.2016) CI.3.0	10 kN to 700 kN

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		Crushing Value	IS 2386 (Part - 4) : 1963(RA.2016) CI.2.0	1 to 60 %
III.	SOIL & ROCK			
1.	Soil	Grain Size Analysis	IS 2720 (Part - 4) : 1985 (RA.2015)	4.75mm to 0.075 mm (0 to 100 %)
		Liquid Limit	IS 2720 (Part - 5) : 1985 (RA. 2015)	15% to 400 %
		Plastic Limit	IS 2720 (Part - 5) : 1985 (RA. 2015)	10 %to 200 %
		Water content – Dry density relation using Light Compaction	IS 2720 (Part - 7) : 1980 (RA.2011)	MDD: 1 g/cc to 3 g/cc
				OMC: 5% to 30%
		Water content – Dry density relation using Heavy Compaction`	IS 2720 (Part - 8) : 1983 (RA.2015)	MDD: 1.5 g/cc 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.2011)	5% to 50 %
		Specific Gravity	IS 2720 (Part - 3) (Sec-1 & 2) : 1973 (RA.2011)	1 to 4

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