

Laboratory **Global Consultancy Services, B.L. No. 103, Khata No. 542, At & PO. Panwadi, Vyara-Unai Road, Ta. Vyara, Dist. Tapi, Gujarat**

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

Certificate Number **TC-8295**

Page 1 of 3

Validity **18.01.2019 to 17.01.2021**

Last Amended on --

"In view of the transition for ISO/IEC 17025:2017, the validity of this accreditation certificate will cease on 30.11.2020"

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.	BUILDING MATERIALS			
1.	Aggregate - Coarse	Sieve Analysis	IS 2386 (Part 1)	Upto 100 % (125 to 4.75 mm)
		Flakiness Index	IS 2386 (Part 1)	5 % to 50 %
		Elongation Index	IS 2386 (Part 1)	5 % to 50 %
		Specific Gravity	IS 2386 (Part 3)	1.0 to 3.0
		Water Absorption	IS 2386 (Part 3)	0.1 % to 6 %
		Bulk Density	IS 2386 (Part 3)	1 kg/L to 3 kg/L
		Impact Value	IS 2386 (Part 4)	5 % to 55 %
		Crushing Value	IS 2386 (Part 4)	5 % to 55 %
		Abrasion Value - Los Angeles	IS 2386 (Part 4)	5 % to 55 %
2.	Aggregate - Fine	Sieve Analysis	IS 2386 (Part 1)	Upto 100 % (0.15 to 10 mm)
		Material Finer than 75 Micron	IS 2386 (Part 1)	1 % to 20 %
		Specific Gravity	IS 2386 (Part 3)	1 to 3
		Water Absorption	IS 2386 (Part 3)	0.2 % to 5 %
		Bulk Density	IS 2386 (Part 3)	1 kg/L to 3 kg/L
3.	Bitumen	Specific Gravity	IS 1202	0.9 to 1.2
		Penetration	IS 1203	30 mm to 100 mm (1/10 th mm)
		Softening Point	IS 1205	30 °C to 65 °C
		Absolute Viscosity	IS 1206 (Part 2)	800 poise to 5000 poise
		Kinematic Viscosity	IS 1206 (Part 3)	250 cSt to 450 cSt
		Ductility	IS 1208	50 mm to 100 mm
4.	Bituminous Mix	Density	ASTM D 2726	1.8 g/cc to 2.7 g/cc
		Binder Content	IRC SP-11	1 % to 9 %

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5.	Bricks (Burnt Clay / Fly Ash)	Dimensions - Burnt Clay Bricks	IS 1077	L=4000 mm to 5000 mm W=2000 mm to 2500 mm H=1000 mm to 1600 mm
		Dimensions - Fly Ash Bricks	IS 12894	L=4000 mm to 5000 mm W=2000 mm to 2500 mm H=1000 mm to 1600 mm
		Compressive Strength	IS 3495 (Part 1)	5 N/mm ² to 35 N/mm ²
		Water Absorption	IS 3495 (Part 2)	10 % to 40 %
6.	Precast Concrete Paving Block	Efflorescence	IS 3495 (Part 3)	Qualitative
		Water Absorption	IS 15658	3 % to 10 %
		Compressive Strength	IS 15658	10 N/mm ² to 70 N/mm ²
7.	Cement (OPC / PPC)	Fineness by Blaine's Air Permeability	IS 4031 (Part 2)	150 m ² /kg to 600 m ² /kg
		Soundness by Le-Chatelier Method	IS 4031 (Part 3)	0.1 mm to 10 mm
		Standard Consistency	IS 4031 (Part 4)	20 % to 40 %
		Initial Setting Time	IS 4031 (Part 5)	30 min to 300 min
		Final Setting Time	IS 4031 (Part 5)	100 min to 600 min
		Compressive Strength	IS 4031 (Part 6)	10 N/mm ² to 65 N/mm ²
8.	Hardened Concrete	Compressive Strength (Cube/Core)	IS 516	5 N/mm ² to 80 N/mm ²
9.	Fresh Concrete	Slump	IS 1199	20 mm to 300 mm
II.	SOIL & ROCK			
1.	Soil	Water Content	IS 2720 (Part 2)	1 % to 50 %
		Specific Gravity	IS 2720 (Part 3/Sec-1)	2.4 to 2.9
		Specific Gravity	IS 2720 (Part 3/Sec-2)	2.5 to 3.1
		Grain Size Analysis (Dry Sieving)	IS 2720 (Part 4)	Upto 100 % (0.075 mm to 4.75 mm)
		Liquid Limit (One Point Method)	IS 2720 (Part 5)	10 % to 80 %
		Plastic Limit	IS 2720 (Part 5)	5 % to 50 %

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Page 3 of 3

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		Light Compaction	IS 2720 (Part 7)	MDD: 1.5 g/cc to 2.5 g/cc OMC:10 % to 35 %
		Heavy Compaction	IS 2720 (Part 8)	MDD: 1.5 g/cc to 2.5 g/cc OMC:10 % to 35 %
		Unconfined Compressive Strength	IS 2720 (Part 10)	0.2 kg/cm ² to 4.0 kg/cm ²
		Direct Shear (Undrained)	IS 2720 (Part 13)	C=0.01 kg/cm ² to 1 kg/cm ² Ø=5° to 50°
		California Bearing Ratio	IS 2720 (Part 16)	1 % to 40 %
		Free Swell Index	IS 2720 (Part 40)	1 % to 400 %
2.	Natural Building Stones	Apparent Specific Gravity	IS 1124	2 to 4
		Water Absorption	IS 1124	0.2 % to 6 %
		Compressive Strength	IS 1121 (Part 1)	10 N/mm ² to 150 N/mm ²
III.	MECHANICAL PROPERTIES OF METALS			
1.	High Strength Deformed Steel Bars for Concrete Reinforcement	Mass per meter	IS 1786	0.2 kg/m to 20 kg/m
		Tensile Strength	IS 1608 (Part 1)	100 N/mm ² to 700 N/mm ²
		Yield Stress	IS 1608 (Part 1)	100 N/mm ² to 700 N/mm ²
		Elongation	IS 1608 (Part 1)	5 % to 40 %