

Laboratory **Research & Engineer Enterprises, SCO No.-38, Shivalik Enclave, Zirakpur, Mohali, Punjab**

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

Certificate Number **TC-7486**

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Validity **29.06.2018 to 28.06.2020**

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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**MECHANICAL TESTING**

<b>I. BUILDING MATERIALS</b>				
<b>1.</b>	<b>Bricks</b>	Compressive Strength	IS 3495 (Part 1)	3 N/mm <sup>2</sup> to 15 N/mm <sup>2</sup>
		Water Absorption	IS 3495 (Part 2)	0.5 % to 30 %
		Efflorescence	IS 3495 (Part 3)	Qualitative
		Dimensions: Length Width Height	IS 1077	4000 mm to 5000 mm 2100 mm to 2400 mm 1300 mm to 1600 mm
<b>2.</b>	<b>Concrete</b>	Compressive Strength	IS 516	3 N/mm <sup>2</sup> to 80 N/mm <sup>2</sup>
<b>3.</b>	<b>Concrete Paver Blocks</b>	Compressive Strength	IS 15658	5 N/mm <sup>2</sup> to 80 N/mm <sup>2</sup>
		Water Absorption	IS 15658	0.10 % to 15 %
<b>4.</b>	<b>Coarse Aggregate</b>	Sieve Analysis	IS 2386 (Part 1)	0.1 % to 100 % 4.75 mm to 80 mm
		Flakiness Index	IS 2386 (Part 1)	1% to 70 %
		Elongation Index	IS 2386 (Part 1)	1% to 70 %
		Impact Value	IS 2386 (Part 4)	1% to 50 %
		Crushing Value	IS 2386 (Part 4)	1% to 50 %
		Water Absorption	IS 2386 (Part 3)	0.1% to 10 %
		10% Fines Value	IS 2386 (Part 4)	5 kN to 500 kN
		Bulk Density	IS 2386 (Part 3)	500 kg/m <sup>3</sup> to 4000 kg/m <sup>3</sup>
<b>5.</b>	<b>Aggregate (Fine )</b>	Sieve Analysis	IS 2386 (Part 1)	0.1 % to 100 % 75 µm to 10 mm
		Water Absorption	IS 2386 (Part 3)	0.01% to 25 %
		Specific Gravity	IS 2386 (Part 3)	2.0 to 4.0
<b>6.</b>	<b>Cement</b>	Consistency	IS 4031 (Part 4)	23 % to 40 %
		Initial Setting Time	IS 4031 (Part 5)	30 minute to 400 minute
		Final Setting Time	IS 4031 (Part 5)	30 minute to 600 minute

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Compressive Strength	IS 4031 (Part 6)	10 N/mm <sup>2</sup> to 80 N/mm <sup>2</sup>
		Soundness Le-Chatelier	IS 4031 (Part 3)	0.1 mm to 10 mm
		Fineness by Blaine Method	IS 4031 (Part 2)	100 m <sup>2</sup> /kg to 500 m <sup>2</sup> /kg
		Density	IS 4031 (Part 11)	1.5 g/cc to 3.5 g/cc
		Fineness by dry sieving	IS 4031 (Part 1)	1 % to 10 %
7.	Bituminous Mix	Bitumen Content	ASTM D 2172	1 % to 10 %
8.	Bitumen	Penetration	IS 1203	1 Division to 400 Division
		Softening Point	IS 1205	10 °C to 150 °C
		Ductility	IS 1208	1 cm to 100 cm
9.	Ceramic Tile	Dimensions Length Width Height	IS 13630 (Part 1)	50 mm to 1000 mm 50 mm to 1000 mm 1 mm to 25 mm
		Water Absorption	IS 13630 (Part 2)	0.01 % to 25 %