

Laboratory **Indian GeoTechnical Services, Plot/Khasara No. 607, Village Deramandi, New Delhi**

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

Certificate Number **TC-6519 (in lieu of T-3633)**

Page 1 of 2

Validity **14.10.2017 to 13.10.2019**

Last Amended on **15.11.2017**

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.	SOIL AND ROCK			
1.	Soil	Moisture Content	IS 2720 (Part 2)	1 % to 50 %
		Liquid Limit	IS 2720 (Part 5)	20 % to 80 %
		Plastic Limit	IS 2720 (Part 5)	15 % to 40 %
		Shrinkage Limit	IS 2720 (Part 6)	10 % to 30 %
		Specific Gravity	IS 2720 (Part 3)	1.5 to 3.0
		Grain Size Analysis (by Dry & Wet Sieving)	IS 2720 (Part 4)	75 µm to 4.75 mm
		Hydrometer Analysis	IS 2720 (Part 4)	Upto 75 µm
		Free Swell Index	IS 2720 (Part 40)	0 to 200 %
		Swelling Pressure	IS 2720 (Part 41)	0.1 kg/cm <sup>2</sup> to 2.0 kg/cm <sup>2</sup>
		Consolidation Test	IS 2720 (Part 15)	C <sub>c</sub> 0.05 to 0.5
		Direct Shear Test	IS 2720 (Part 13)	C: 0 to 1.0 kg/cm <sup>2</sup> Φ: 5° to 45°
		Unconfined Compressive Strength	IS 2720 (Part 10)	C: 0 to 2.50 kg/cm <sup>2</sup>
		Triaxial Shear	IS 2720 (Part 11 & Part 12)	C: 0 to 2.50 kg/cm <sup>2</sup> Φ: 5° to 40°
		Permeability (Falling Head)	IS 2720 (Part 17)	10 <sup>-7</sup> to 10 <sup>-1</sup> cm/s
				Light Compaction
Heavy Compaction	IS 2720 (Part 8)			MDD: 1.4 g/cc to 2.1 g/cc OMC: 5 % to 20 %
2.	Rock	CBR Test	IS 2720 (Part 16)	0.5 % to 35 %
		Water Absorption	IS 13030	0.02 % to 10 %
		Moisture Content		0.01 % to 10 %
		Density Test		2.20 g/cc to 2.80 g/cc
		Porosity		0.1 % to 50 %
Specific Gravity	IS 1122	2 to 3		

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Page 2 of 2

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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
		Point Load Index	IS 8764	0.1 MPa to 30 MPa
		Unconfined Compressive Strength	IS 9143	5 MPa to 300 MPa
		Modulus of elasticity & Poisson's ratio	IS 9221	MOE: 3 GPa to 150 GPa Poisson's Ratio: 0.01 to 0.50
		Strength of Rock Materials in Triaxial Compression	IS 13047	C : 2.50 MPa to 250 MPa ' $\phi$ ' : 20 ° to 80 °
		Slake Durability	IS 10050	I <sup>st</sup> Cycle: 0 to 100 % II <sup>nd</sup> Cycle: 0 to 100 %
		Tensile Strength (Brazilian Test)	IS 10082	Upto 100 MN/mm <sup>2</sup>
<b>II.</b>	<b>BUILDING MATERIALS</b>			
<b>1.</b>	<b>Coarse Aggregate</b>	Sieve Analysis	IS 2386 (Part 1)	4.75 mm to 80 mm
		Crushing Value	IS 2386 (Part 4)	1 % to 45 %
		Specific Gravity	IS 2386 (Part 3)	2.5 to 3.1
		Water Absorption	IS 2386 (Part 3)	0.5 % to 5 %
		Bulk Density	IS 2386 (Part 3)	1.2 kg/L to 1.6 kg/L
		Flakiness Index	IS 2386 (Part 1)	5 % to 50 %
		Elongation Index	IS 2386 (Part 1)	5 % to 50 %
		Impact Value	IS 2386 (Part 4)	5 % to 50 %
		Abrasion Value	IS 2386 (Part 4)	5 % to 50 %
<b>2.</b>	<b>Fine Aggregate</b>	Sieve analysis	IS 2386 (Part 1)	0.075 mm to 10 mm
		Specific Gravity	IS 2386 (Part 3)	2.4 to 2.9
		Water Absorption	IS 2386 (Part 3)	0.5 % to 8 %
		Bulk Density	IS 2386 (Part 3)	1.2 kg/L to 1.6 kg/L