

Laboratory **Explore Engineering Consultants Private Limited, C-273, Sector-63, Noida, Uttar Pradesh**

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

Certificate Number **TC-7147**

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Validity **13.04.2018 to 12.04.2020**

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

I.	SOIL & ROCK			
1.	Soil	Bulk Density	IS 2720 (Part-29)	1 g/cm ³ to 2.2 g/cm ³
		Water Content	IS 2720 (Part-2)	0.1 % to 45 %
		Specific Gravity By Density Bottle	IS 2720 (Part-3,Sec-1), Cl.4	1.5 to 3
		Grain Size Analysis of Soil (Hydrometer Method)	IS 2720 (Part-4), Cl. 5.2	75 µm to 1 µm
		Grain Size Analysis of Soil (Wet, Dry Sieving Method)	IS 2720 (Part-4) Cl. 3, Cl. 4.3	4.75 mm to 0.075 mm
		Liquid Limit	IS 2720 (Part-5)	15 % to 200 %
		Plastic Limit	IS 2720 (Part-5)	5 % to 60 %
		Shrinkage Limit	IS 2720 (Part-6)	5 % to 30 %
		Direct Shear	IS 2720 (Part-13)	C = 0.01 kg/cm ² to 0.3 kg/cm ² φ = 15° to 40°
		Unconfined Compression (UC)	IS 2720 (Part-10)	C = 0.1 kg/cm ² to 15 kg/cm ²
		Unconsolidated Undrained Triaxial (UU)	IS 2720 (Part-11)	C = 0.01 kg/cm ² to 10 kg/cm ² φ = 1° to 20°
		Consolidated Undrained Triaxial (CU)	IS 2720 (Part-12)	C = 0.01 kg/cm ² to 5 kg/cm ² φ = 1° to 40°
		Consolidated Drained Triaxial (CD)	IS 2720 (Part-12)	C = 0 to 5 kg/cm ² φ = 0 to 40°
		One Dimensional Consolidation	IS 2720 (Part-15)	Cc = 0.01 to 4.5 Mv = 0.01 to 3.0 cm ² /kg

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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
		Free Swell Index	IS 2720 (Part-40)	Up to 200 %
		Proctor Compaction (Heavy Compaction)	IS 2720 (Part-8)	
		Optimum Moisture Content		5% to 30%
		Maximum Dry Density		1 g/cm ³ to 3 g/cm ³
		Proctor Compaction (Light Compaction)	IS 2720 (Part-7)	
		Optimum Moisture Content		5 % to 20%
		Maximum Dry Density		1.1 g/cm ³ to 2.3 g/cm ³
		California Bearing Ratio (CBR)	IS 2720 (Part-16)	1% to 80%
2.	Rock	Water Absorption	IS 1124	Upto 20%
		Bulk Density	IS 13030	1 g/cm ³ to 3 g/cm ³
		Water Content	IS 13030	0.1% to 25%
		Unconfined Compressive Strength Test	IS 9143	20 MPa to 500 MPa