

Laboratory Apex Infra Projects, 178, Anand Industrial Estate, Mohannagar, Ghaziabad, Uttar Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-8278

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Validity 10.01.2019 to 09.01.2021

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 |
|-----|----------------------------|-------------------------|---|--|
|-----|----------------------------|-------------------------|---|--|

MECHANICAL TESTING

| I. | SOIL & ROCK | | | |
|----|-------------|---|--|---|
| 1. | Soil | Sieve Analysis | IS 2720 (Part 4): 1985 (RA 2015) | 0.1 % to 100 % (4.75 mm to 0.075 mm) |
| | | Hydrometer Test | IS 2720 (Part 4): 1985 (RA 2015) | 0.1 % to 90 % |
| | | Liquid limit | IS 2720 (Part 5): 1985 (RA 2015) | 15 % to 60 % |
| | | Plastic limit | IS 2720 (Part 5): 1985 (RA 2015) | 8 % to 25 % |
| | | Water Content | IS 2720 (Part 2): 1973 (RA 2015) | 1 % to 200 % |
| | | Specific Gravity | IS 2720 (Part 3 & Sec 1): 1980 (RA 2016) | 1.0 to 4.0 |
| | | Light Compaction Test Maximum Dry Density Optimum Moisture Content | IS 2720 (Part 7): 1980 (RA 2016) | 1.0 g/cm ³ to 2.85 g/cm ³ 4 % to 50 % |
| | | Heavy Compaction Test Maximum Dry Density Optimum Moisture Content | IS 2720 (Part 8): 1980 (RA 2016) | 1.0 g/cm ³ to 3.2 g/cm ³ 4 % to 50 % |
| | | Direct Shear Test Cohesion Angel of internal friction | IS 2720 (Part 13): 1981 (RA 2016) | 0.01 kg/cm ² to 1.0 kg/cm ² 22° to 40° |
| | | Triaxial Shear Test (UU) Cohesion Angel of internal friction | IS 2720 (Part 11): 1993 (RA 2016) | 0.1 kg/cm ² to 4.0 kg/cm ² 1° to 27° |
| | | Unconfined Compressive Strength | IS 2720 (Part 10): 1991 (RA 2015) | 0.5 kg/cm ² to 5.0 kg/cm ² |

Birendra Prasad Murmu
Convenor

N. Venkateswaran
Program Manager

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| | | California Bearing Ratio | IS 2720 (Part 16): 1987 (RA 2016) | 2.5 to 12.0 |
| | | Free Swell index | IS 2720 (Part 40): 1977 (RA 2016) | 5 % to 200 % |
| | | Swelling Pressure | IS 2720 (Part 41): 1977 (RA 2016) | 0.05 kg/cm ² to 2.0 kg/cm ² |
| | | Consolidation Test | IS 2720 (Part 15): 1986 (RA 2016) | 0.05 kg/cm ² to 8 kg/cm ² |
| 2. | Rock | Uniaxial Compressive Strength | IS 9143:1979 (RA 2016) | 20 kg/cm ² to 1500 kg/cm ² |
| | | Point load Test | IS 8764:1998 (RA 2014) | 1.5 kg/cm ² to 1500 kg/cm ² |
| | | Hardness (Mohs scale) | IS 13630 (Part 13): 2006 (RA 2017) | 1 to 9 |