



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name METASOIL ENGINEERING SERVICES, A-2 SHIVNAGAR ASSOCIATES, NAVSARI, GUJARAT, INDIA
Accreditation Standard ISO/IEC 17025:2017
Certificate Number TC-8454 Page No. : 1 / 8
Validity 22/04/2019 to 21/04/2021 Last Amended on -

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
1	MECHANICAL-BUILDINGS MATERIALS	Autoclave Cellular (Aerated) Concrete Blocks	Block Density	IS 2185 (Part 3): 1984	450 kg/m ³ to 1000 kg/m ³
2	MECHANICAL-BUILDINGS MATERIALS	Autoclave Cellular (Aerated) Concrete Blocks	Compressive Strength	IS 6441 (Part 5): 1972	1 N/mm ² to 50 N/mm ²
3	MECHANICAL-BUILDINGS MATERIALS	Autoclave Cellular (Aerated) Concrete Blocks	Dimensions (Height)	IS 2185 (Part 3): 1984	200 mm to 300 mm
4	MECHANICAL-BUILDINGS MATERIALS	Autoclave Cellular (Aerated) Concrete Blocks	Dimensions (Length)	IS 2185 (Part 3): 1984	400 mm to 600 mm
5	MECHANICAL-BUILDINGS MATERIALS	Autoclave Cellular (Aerated) Concrete Blocks	Dimensions (Width)	IS 2185 (Part 3): 1984	100 mm to 250 mm
6	MECHANICAL-BUILDINGS MATERIALS	Beam	Flexural Strength	IS 516:1959 RA: 2018	2 N/mm ² to 8 N/mm ²
7	MECHANICAL-BUILDINGS MATERIALS	Bitumen	Absolute Viscosity	IS 1206 (Part 2):1978 RA: 2014	600 Poises to 4000 Poises
8	MECHANICAL-BUILDINGS MATERIALS	Bitumen	Ductility at 25°C	IS 1208:1978 RA: 2014	10 cm to 100 cm
9	MECHANICAL-BUILDINGS MATERIALS	Bitumen	Kinematic Viscosity at 125°C	IS 1206 (Part3):1978 RA: 2014	100 cSt to 600 cSt



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10	MECHANICAL-BUILDINGS MATERIALS	Bitumen	Loss on Heating	IS 1212: 1978, RA: 2014	Upto 1 %
11	MECHANICAL-BUILDINGS MATERIALS	Bitumen	Penetration at 25°C	IS 1203:1978 RA: 2014	10 (1/10mm) to 400 (1/10mm)
12	MECHANICAL-BUILDINGS MATERIALS	Bitumen	Softening Point	IS 1205:1978 RA: 2014	10 °C to 70 °C
13	MECHANICAL-BUILDINGS MATERIALS	Bitumen	Specific Gravity	IS 1202: 1978 (RA 2014)	0.95 to 1.05
14	MECHANICAL-BUILDINGS MATERIALS	Bitumen Mix	Flow	ASTM D 6927: 2015	1 mm to 6.2 mm
15	MECHANICAL-BUILDINGS MATERIALS	Bitumen Mix	Stability	ASTM D 6927: 2015	2 kN to 20 kN
16	MECHANICAL-BUILDINGS MATERIALS	Bituminous Mix	Binder Content	IRC SP 11: 1984; Appendix 5; Clause C	3.5 % to 6.5 %
17	MECHANICAL-BUILDINGS MATERIALS	Burnt Clay/ Building Brick & Burnt Clay/ Fly Ash Building Brick	Dimensions (Height)	IS 1077: 1997	1000 mm to 2300 mm
18	MECHANICAL-BUILDINGS MATERIALS	Burnt Clay/ Building Brick & Burnt Clay/ Fly Ash Building Brick	Dimensions (Length)	IS 1077: 1997	2000 mm to 5000 mm
19	MECHANICAL-BUILDINGS MATERIALS	Burnt Clay/ Building Brick & Burnt Clay/ Fly Ash Building Brick	Dimensions (Width)	IS 1077: 1997	1600 mm to 2500



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20	MECHANICAL-BUILDINGS MATERIALS	Burnt Clay/ Building Brick & Burnt Clay/ Fly Ash Building Brick	Efflorescence	IS 3495 (Part 3): 1992	Qualitative
21	MECHANICAL-BUILDINGS MATERIALS	Burnt Clay/ Building Brick & Burnt Clay/ Fly Ash Building Brick	Efflorescence	IS 3495 (Part 3): 1992	Qualitative
22	MECHANICAL-BUILDINGS MATERIALS	Burnt Clay/ Building Brick & Burnt Clay/ Fly Ash Building Brick	Water Absorption	IS 3495 (Part 2): 1992	1 % to 30 %
23	MECHANICAL-BUILDINGS MATERIALS	Cement (OPC)	Fineness by Blaine's Air Permeability(only for OPC)	IS 4031 (Part 2):1988 RA: 2014	150 m ² /kg to 600 m ² /kg
24	MECHANICAL-BUILDINGS MATERIALS	Cement (OPC/PPC)	Compressive Strength	IS 4031 (Part 6): 1988 (RA 2014)	10 N/mm ² to 80 N/mm ²
25	MECHANICAL-BUILDINGS MATERIALS	Cement (OPC/PPC)	Compressive Strength	IS 4031 (Part 6): 1988	10 N/mm ² to 80 N/mm ²
26	MECHANICAL-BUILDINGS MATERIALS	Cement (OPC/PPC)	Density	IS 4031 (Part 11): 1988 (RA 2014)	2.8 g/cc to 3.3 g/cc
27	MECHANICAL-BUILDINGS MATERIALS	Cement (OPC/PPC)	Final Setting Time	IS 4031 (Part 5): 1988 (RA 2014)	30 minutes to 600 minutes
28	MECHANICAL-BUILDINGS MATERIALS	Cement (OPC/PPC)	Fineness by Dry Sieving	IS 4031 (Part 1): 1996 (RA 2014)	0.1 % to 10 %
29	MECHANICAL-BUILDINGS MATERIALS	Cement (OPC/PPC)	Initial Setting Time	IS 4031 (Part 5): 1988 (RA 2014)	30 minutes to 300 minutes



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30	MECHANICAL-BUILDINGS MATERIALS	Cement (OPC/PPC)	Soundness by Le-Chatelier's Method	IS 4031 (Part 3): 1988 (RA 2014)	0.1 mm to 10 mm
31	MECHANICAL-BUILDINGS MATERIALS	Cement (OPC/PPC)	Standard Consistency	IS 4031 (Part 4): 1988 (RA 2014)	10 % to 40 %
32	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Bulk Density	IS 2386 (Part 3): 1963 (RA 2016); Clause 2.0	1.2 kg/L to 1.7 kg/L
33	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Impact Value	IS 2386 (Part 4): 1963 (RA 2016); Clause 4.0	5 % to 40 %
34	MECHANICAL-BUILDINGS MATERIALS	Coarse- Aggregate	Soundness by Na ₂ So ₄	IS 2386 (Part 5): 1963 (RA 2016)	1 % to 15 %
35	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	10% Fines Value	IS 2386 (Part 4): 1963 (RA 2016); Clause 3.0	10 kN to 490 kN
36	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Abrasion Value by Los Angeles Machine	IS 2386 (Part 4): 1963 (RA 2016); Clause 5.3	5 % to 55 %
37	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Crushing Value	IS 2386 (Part 4): 1963 (RA 2016) ; Clause 2.0	5 % to 55 %
38	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Elongation Index	IS 2386 (Part 1): 1963 (RA 2016); Clause 5.0	5 % to 70 %
39	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Finer than 75 Micron	IS 2386 (Part 1)-1963 RA: 2011	1 % to 10 %



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40	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Flakiness Index	IS 2386 (Part 1): 1963 (RA 2016); Clause 4.0	5 % to 70 %
41	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Gradation- Sieve Analysis	IS 2386 (Part 1): 1963, RA: 2016	4.75 mm to 63 mm
42	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Soundness by MgSo4	IS 2386 (Part 5): 1963 (RA 2016)	1 % to 20 %
43	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Specific Gravity	IS 2386 (Part 3): 1963 (RA 2016); Clause 2.0	1.5 to 4
44	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Striping Value	IS 6241: 1971, RA: 2017	Qualitative
45	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Striping Value	IS 6241: 1971	Qualitative
46	MECHANICAL-BUILDINGS MATERIALS	Coarse Aggregates	Water Absorption	IS 2386 (Part 3): 1963 (RA 2016); Clause 2.0	0 % to 25 %
47	MECHANICAL-BUILDINGS MATERIALS	Cube	Compressive Strength	IS 516:1959 RA: 2018	10 N/mm ² to 80 N/mm ²
48	MECHANICAL-BUILDINGS MATERIALS	Fine Aggregate	Bulk Density	IS 2386 (Part 3): 1963 (RA 2016); Clause 3.0	1.4 kg/L to 2.2 kg/L
49	MECHANICAL-BUILDINGS MATERIALS	Fine Aggregate	Finer than 75 Micron	IS 2386 (Part 1): 1963 (RA 2016); Clause 3.0	1 % to 20 %



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50	MECHANICAL-BUILDINGS MATERIALS	Fine Aggregate	Sieve Analysis	IS 2386 (Part 1): 1963, RA: 2016	0.15 mm to 10 mm
51	MECHANICAL-BUILDINGS MATERIALS	Fine Aggregate	Soundness by Na ₂ So ₄	IS 2386 (Part 5): 1963 (RA 2016)	1 % to 15 %
52	MECHANICAL-BUILDINGS MATERIALS	Fine Aggregate	Specific Gravity	IS 2386 (Part 3): 1963 (RA 2016); Clause 2.0	1.5 to 4
53	MECHANICAL-BUILDINGS MATERIALS	Fine Aggregate	Water Absorption	IS 2386 (Part 3): 1963, RA: 2016	Upto 15%
54	MECHANICAL-BUILDINGS MATERIALS	Fine Aggregate/ Sand	Sieve Analysis (Gradation)	IS 2386 (Part 1): 1963	4.75 mm to 150 μm
55	MECHANICAL-BUILDINGS MATERIALS	Fine Aggregate/ Sand	Soundness by Magnesium sulfate(MgSO ₄)	IS 2386 (Part 5): 1963	1 % to 20 %
56	MECHANICAL-BUILDINGS MATERIALS	Paving Block	Abrasion Resistance	IS 15658: 2006	5000 mm ² to 15000 mm ²
57	MECHANICAL-BUILDINGS MATERIALS	Paving Block	Water Absorption	IS 15658: 2006	3 % to 10 %
58	MECHANICAL- SOIL AND ROCK	Soil	California Bearing Ratio	IS 2720 (Part 16): 1987 (RA 2016)	1 % to 80 %
59	MECHANICAL- SOIL AND ROCK	Soil	Consolidation - Cc	IS 2720 (Part 15): 1986 RA: 2011	0.01 kg/cm ² to 4.0 kg/cm ²
60	MECHANICAL- SOIL AND ROCK	Soil	Direct Shear (Angle of Friction)	IS 2720 (Part 13): 1986 (RA 2016)	5 ° to 45 °



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61	MECHANICAL- SOIL AND ROCK	Soil	Direct Shear (Cohesion)	IS 2720 (Part 13): 1986, RA: 2016	Upto 1 kg/cm ²
62	MECHANICAL- SOIL AND ROCK	Soil	Free Swell Index	IS 2720 (Part 40): 1977 (RA 2016)	1 % to 400 %
63	MECHANICAL- SOIL AND ROCK	Soil	Grain Size Analysis	IS 2720 (Part 4): 1985, RA: 2015	0.075 mm to 4.75 mm
64	MECHANICAL- SOIL AND ROCK	Soil	Grain Size Analysis by Hydrometer	IS 2720 (Part 4): 1985, RA: 2015	0.002 mm to 0.075 mm
65	MECHANICAL- SOIL AND ROCK	Soil	Heavy Compaction (Maximum Dry Density)	IS 2720 (Part 8): 1983 (RA 2015)	1 g/cc to 3 g/cc
66	MECHANICAL- SOIL AND ROCK	Soil	Heavy Compaction (Optimum Moisture Content)	IS 2720 (Part 8): 1983 (RA 2015)	5 % to 25 %
67	MECHANICAL- SOIL AND ROCK	Soil	Light Compaction (Maximum Dry Density)	IS 2720 (Part 7): 1980 (RA 2016)	1 g/cc to 3 g/cc
68	MECHANICAL- SOIL AND ROCK	Soil	Light Compaction (Optimum Moisture Content)	IS 2720 (Part 7): 1980 (RA 2016)	5 % to 30 %
69	MECHANICAL- SOIL AND ROCK	Soil	Liquid Limit by Cone Penetration Method	IS 2720 (Part 5): 1985 (RA 2015); Clause 4.0	5 % to 70 %
70	MECHANICAL- SOIL AND ROCK	Soil	Plastic Limit	IS 2720 (Part 5): 1985 (RA 2015)	5 % to 70 %
71	MECHANICAL- SOIL AND ROCK	Soil	Shrinkage Limit	IS 2720 (Part 6): 1972 (RA 2016)	10 % to 40 %
72	MECHANICAL- SOIL AND ROCK	Soil	Specific Gravity	IS 2720 (Part 3/Sec I): 1980 (RA 2016)	2.0 to 3.0
73	MECHANICAL- SOIL AND ROCK	Soil	Swelling Pressure	IS 2720 (Part 41): 1977 (RA 2016)	0.1 kg/cm ² to 2.0 kg/cm ²



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74	MECHANICAL- SOIL AND ROCK	Soil	Triaxial Compression (Cohesion)	IS 2720 (Part 11): 1993, RA: 2016	Upto 2 kg/cm ²
75	MECHANICAL- SOIL AND ROCK	Soil	Triaxial Compression (Angle of Friction)	IS 2720 (Part 11): 1993 (RA 2016)	5 ° to 40 °
76	MECHANICAL- SOIL AND ROCK	Soil	Unconfined Compression Strength	IS 2720 (Part 10): 1991 (RA 2015)	0.2 kg/cm ² to 4.0 kg/cm ²
77	MECHANICAL- SOIL AND ROCK	Soil	Water Content by Oven Drying Method	IS 2720 (Part 2): 1973 (RA 2015); Section 1	1 % to 50 %