SINGAPORE LABORATORY ACCREDITATION SCHEME

Accredited Laboratory SAC-SINGLAS

Schedule

Element Geolab (S) Pte Ltd
Shun Li Industrial Park
215 Kaki Bukit Ave 1
#02-00
Singapore 416042

Certificate No. : LA-2011-0501-B

Issue No. : 13

Date : 08 May 2024

Expiry of Certificate : 13 January 2027

FIELD OF TESTING : Civil Engineering Testing

MATERIALS/ PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT
A. SOIL	1. Determination of Moisture Content by Oven- Drying Method	BS 1377: Part 2: 1990: 3.2 BS 1377-2:2022 CL 4 ISO 17892-1:2014 ASTM D2216-19
	2. Determination of the Liquid Limit by Casagrande Apparatus Method	BS 1377: Part 2: 1990: 4.5 BS 1377-2:2022 CL 5.4 ISO 17892-12:2018 ASTM D4318-17
	3. Determination of the Plastic Limit and Plasticity Index	BS 1377: Part 2: 1990: 5 BS 1377-2:2022 CL 6 ISO 17892-12:2018 ASTM D4318-17
	4. Determination of Shrinkage Characteristics by Linear Shrinkage	BS 1377: Part 2: 1990: 6 & 6.5 BS 1377-2:2022 CL 7
	5. Determination of Density by: Linear Measurement Method	BS 1377: Part 2: 1990: 7.2 BS 1377-2:2022 CL 8 ISO 17892-2:2014
	6. Determination of Particle Density by Gas Jar Method	BS 1377: Part 2: 1990: 8.2 BS 1377-2:2022 CL 9
	7. Determination of Particle Size Distribution by a) Wet Sieving Method b) Dry Sieving Method c) Sedimentation by the Hydrometer Method	BS 1377: Part 2: 1990: 9.2 BS 1377: Part 2: 1990: 9.3 BS 1377:Part 2: 1990: 9.5 BS 1377-2:2022 CL 10 ISO 17892-4:2016

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MATERIALS/ PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT
A. SOIL (Continue)	8. Determination of the one-dimensional Consolidation Properties	BS 1377: Part 5: 1990: 3 BS 1377-2:2022 CL 16 ISO 17892-5:2017 ASTM D2435/ D2435M-11
	9. Determination of the Unconfined Compressive Strength	BS 1377: Part 7: 1990: 7 BS 1377-2:2022 CL 27 ISO 17892-7:2017
	10. Determination of Shear Strength by the laboratory Vane method	BS 1377: Part 7: 1990: 3 BS 1377-2:2022 CL 24
	11. Determination of the Undrained Shear Strength in Triaxial Compression without Measurement of Pore Pressure	BS 1377: Part 7: 1990: 8 BS 1377-2:2022 CL 28 ISO 17892-8:2018
	12. Determination of the Undrained Shear Strength in Triaxial Compression with Multistage Loading and without Measurement of Pore Pressure	BS 1377: Part 7: 1990: 9 ISO 17892-7:2017
	13. Determination of the Liquid Limit by Cone Penetrometer Method	BS 1377: Part 2: 1990: 4.3 BS 1377-2:2022 CL 5.2 ISO 17892-12:2018 ASTM D4318-17
	14. Consolidated- Undrained Triaxial Compression Test with Measurement of Pore Pressure	BS 1377: Part 8: 1990: 7 BS 1377-2:2022 CL 29 ISO 17892-9:2018
	15. Consolidated-Drained Triaxial Compression Test with Measurement of volume change	BS 1377: Part 8: 1990: 8 BS 1377-2:2022 CL 30 ISO 17892-9:2018
	16. Determination of Permeability by Falling-Head Method	K.H Head Vol.2 ISO 17892-11:2019
	17. Determination of the Unconsolidated Undrained Triaxial Compression Test with Measurement of Pore Pressure	BS 1377: Part 7: 1990: Section 8 BS 1377: Part 8: 1990 BS1377-2:2022 CL 28 ISO 17892-8:2018 ISO 17892-9:2018

MATERIALS/ PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT
	18. Determination of Particle Density (Pycnometer)	BS 1377: Part 2: 1990: 8.3 BS 1377-2:2022 CL 9 ISO 17892-3:2015
	19. Determination of Dry Density / Moisture Content	BS 1377: Part 4: 1990 BS 1377-2:2022 CL 11
	20. Sand Replacement method Suitable for fine-medium grained soils (small Pouring Cylinder method)	BS 1377: Pt 9: 1990
	21. Determination of pH Value	BS 1377: Part 3: 2018
	22. Determination of Shear Strength By Direct Shear Box	BS 1377: Part 7: 1990 BS 1377-2:2022 CL 25 ISO 17892-10:2018
	23. Determination of Permeability in a Triaxial Cell	BS 1377: Part 6: 1990: 6 BS 1377-2:2022 CL 21 ISO 17892-11:2019
	24. One Dimensional Consolidation Test Using Controlled-Strain Loading	ASTM D4186/4186M-2020
	25. Determination of consolidation properties using a hydraulic cell	BS 1377: Part 6: 1990 CL 3
B. ROCK	1. Point Load Test	International Society for Rock Mechanism (ISRM) 2nd Re-Draft – March 1984 ASTM D5731-16
	2. Unconfined Compressive Strength of Intact Rock Core	ASTM D7012: 14E1
	3. Slakes Durability of Shales and Similar Weak Rock	ASTM 1644-04 ASTM 4644-16
	4. Indirect Tensile Brazil Test	ISRM (Blue Book) Part 2
	5. Moisture Content of Rock	ISRM (Blue Book) Part 2 ASTM D2216-19
	6. Suggest Methods for Porosity/ Density Determination Using Saturation and Caliper Techniques	ISRM (Blue Book) Part 2

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Accredited Inspection Body SAC

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Approved Signatories

Ms San San Aye	-	All tests
Mr Kuttikkattu Purushothaman Bijoy	-	For items A1, A3, A8, A9, A11, A13, A18, A24 and A25 only

Note:

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025. A laboratory's fulfilment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and **management system requirements** that are necessary for it to consistently deliver technically valid test results. The **management system requirements** in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001