Issue date: 25 March 2025
Valid Until: -

NO: SAMM 1120

LABORATORY LOCATION/ CENTRAL OFFICE:	Globallab Engineering Sdn Bhd B-20, GF, Chunghua Avenue Lorong Mat Kilau 24/1, Jalan Penjara, 25100 Kuantan, Pahang , 25100, PAHANG MALAYSIA
ACCREDITED SINCE :	25 MARCH 2025
FIELD(S) OF TESTING:	MECHANICAL

This laboratory has demonstrated its technical competence to operate in accordance with MS ISO/IEC 17025:2017 (ISO/IEC 17025:2017).

This laboratory's fulfillment 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 and calibrations. 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 (see Joint ISO-ILAC-IAF Communiqué dated April 2017).

CENTRAL LOCATION:	Globallab Engineering Sdn Bhd B-20, GF, Chunghua Avenue Lorong Mat Kilau 24/1, Jalan Penjara, 25100 Kuantan, Pahang , 25100, Pahang
FIELD(S) OF TESTING :	MECHANICAL,

SCOPE OF TESTING : MECHANICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Asphalt	Sample (Centrifuge Extraction Method)	None
	Size Analysis of Extracted	ASTM D5444 - 15
	Thickness Or Height of Compacted Bituminous Paving	ASTM D3549/D3549M-18, method A
	Quantitative extraction of	ASTM D2172/D2172M-17e1
	Quantitative extraction of	ASTM D2172/D2172M-17e1
Concrete	Compressive Strength of Concrete Cube	MS EN 12390 : Part 3 : 2012
	Determination of Compressive	BS EN 12390 : Part 3 : Annex B
	Compressive Strength of	BS EN 12504-1:2019
	Ultrasonic Pulse Velocity Test	BS EN 12504 -" 4: 2021
	Ultrasonic Pulse Velocity Test	BS EN 12504 -" 4: 2021

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	c) Weld	None
	a) Tensile	BS EN ISO 15630-2: 2010
	c) Rebend	sampling
	Initial Surface Absorption	BS 1881:Part 208:1996
	Electrical Indication of	None
	ii Yield Strength	None
	iii Elongation after Fracture	None
	iv Elongation at Maximum	None
	Forces (as defined in	None
	MS ISO 15630-1: 2012)	None
	Cubes	None
	Compressive Strength of Concrete	BS 1881: Part 120: 1983
	Cores	BS EN 12504-1: 2019
	Height of Compacted Bituminous	None
	Paving Mixture Specimen	None
	Compressive Strength of Test SpecimensBS EN 12390-3:2019	Compressive Strength of Test Specimens
	Compressive Strength of Test Specimens	
	Density of Hardened ConcreteBS EN 12390-7:2019	Density of Hardened Concrete
	Density of Hardened Concrete	
	Depth of Penetration of Water Under PressureBS EN 12390-8:2019	Depth of Penetration of Water Under Pressure
	Depth of Penetration of Water Under Pressure	
	Cored Specimen- Taking,BS EN 12504-1:2019	Cored Specimen- Taking,
	Cored Specimen- Taking,	
Mechanical/ Physical	Bitumen Content in Hot Mixed Paving Mixture and Pavement	ASTM D2172/D2172M-17e1
	None	None
	None	None
	Determination of the Insitu California Bearing Ratio	BS 1377 : Part 9 : 1990 : Clause 4.3
Reinforcement Bar	Tensile Strength And Yield	MS 146 : 2014
	Tensile Test (Yield strength, Ratio of tensile strength/ yield strength, Percentage of total elongation at maximum force)	Based on MS 146:2014 (Cl. 7.3.3) BS 4449:2005+A3:2016 (Clause 7.2.3) ISO 6892- 1:2019
	Tensile Test	MS 146:2014 (Clause 7.3.3)
	Tensile Test	MS 146:2014 (Clause 7.3.3)
	None	BS 4449:2005+A3:2016
Soil	Moisture Content	BS 1377 Part 2: 1990 : Clause 3.2
	Liquid Limit (Cone Penetrometer Method)	BS 1377 Part 2: 1990 : Clause 4.3
	In-situ Density Test by Sand	None

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	pH	MS 2457: 2012
	Electrical Conductivity	MS 2458: 2012
	Available Phosphorus	In-house method S07 based on Bray & Kurtz, 1945 & ICP-OES
	Total Nitrogen	MS ISO 13878: 2014
	Total Phosphorus	In-house method S13 based on EPA Method 3050B & ICP-OES
	Determination of Particle Density (Small Pyknometer Method)	BS 1377:1990 Part 2, Clause 8.3
	Determination of Particle Size Distribution (Dry Sieving Method)	BS 1377:1990 Part 2, Clause 9.3
	Determination of Particle Size Distribution (Wet Sieving Method)	BS 1377:1990 Part 2, Clause 9.2
	Determination of Particle Size	None
	Determination of Water Content	BS 1377: Part 2
	Determination of pH value of fine	BS 1377-3: 2018
	Determination of Soil pH	MS 678: Part - V: Part |, Soil pH:
	None	None
	Total Recoverable Elements	USEPA 200.2 Rev. 2 : 8 EMMC
	Chloride	MS 678: Part VI to
	In-situ Density Test	BS 1377: Part 9:1990 Clause 2.1
	Moisture Content	BS EN ISO 17892-1:2014
	Particle Size Distribution -" Wet	BS EN ISO 17892-4:2016
	Arsenic, Mercury, Cadmium,	EPA 3050 B
	Loss on Ignition	BS 1377 part 3: 1990 (Clause 4)
	Carbonate	BS 1377 Part 3: 1990 (Clause 6.3)
	Moisture Content	BS 1377-1: 2016
	In-situ California Bearing Ratio (CBR)	BS 1377 : Part 9 : 1990 Clause 4.3
	Moisture Content	BS 1377-1: 2016
	In-situ California Bearing Ratio (CBR)	BS 1377 : Part 9 : 1990 Clause 4.3
	pH Value	BS 1377-3:1990:9.5
	None	None
	Aluminum (Al)	USEPA 200.2, Revision 2.8, 1994
	Particle Size Distribution (gravel,	In House Method 0588 based on
	Determination of Particle Size Distribution for Soils	BS 1377: Part 2: 1990 Clause 9
	Determination of Moisture Content	BS 1377: Part 2: 1990 Clause 3.2
	Determination of the Liquid Limit (Casagrande apparatus method)	BS 1377: Part 2: 1990 Clause 4.5
	Determination of the Plastic Limit and Plasticity Index	BS 1377: Part 2: 1990 Clause 5
	Determination of dry density/moisture content relationship (Rammer Method)	BS 1377: Part 4: 1990 Clause 3.3, 3.4, 3.5 & 3.6

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Determination of dry density/moisture content relationship (Vibrating Hammer Method)	BS 1377: Part 4: 1990 Clause 3.7
	Determination of soil density test	BS 1377: Part 2: 1990 Clause 7
	Determination of The Moisture	BS 1377: Part 2:1990: Method 3.2
	Determination of In-Situ Density	BS 1377: Part 9: 1990
	Determination of The Moisture	BS 1377: Part 2:1990: Method 3.2
	Toxicity characteristic leaching	USEPA 1311: 1992
	Phosphorus, P Sulphur, S	None
	SVOCs (Refer to Appendix 2 and 3 for	EPA Method 3510C: 1996
	Determination of Moisture Content	BS 1377:2:1990, Clause 3.2 MS 1056:2:2005, Clause 4.2
	Determination of Density	BS 1377:2:1990, Clause 7.2 MS 1056:2:2005, Clause 8.2
	Linear Shrinkage	BS 1377:2:1990, Clause 6.5 MS 1056:2:2005, Clause 7.5
	Determination of Particle Density	BS 1377:2:1990, Clause 8.3 MS 1056:2:2005, Clause 9.3
	Determination of Liquid Limit Using Casagrande Method	BS 1377:2:1990, Clause 4.5 & 4.6 MS 1056:2:2005, Clause 5.5 & 5.6
	Determination of Liquid Limit Using Cone Penetrometer Method	BS 1377:2:1990, Clause 4.3 & 4.4 MS 1056:2:2005, Clause 5.3 & 5.4
	Determination of the Plastic Limit	BS 1377:2:1990, Clause 5
	Maximum dry density / Moisture content relationship	BS 1377: Part 4: 1990
	Shear Strength Test without	None
	The laboratory Vane e	BS 1377: Part 7: 1990: Clause 3
	Field Density Test (Sand Replacement Method)	BS 1377: Part 9:1990 Clause 2.1
	Plastic limit test	Test instruction reference to BS
	Moisture content	BS1377-2, Clause 4.1