

# **Accredited Laboratory**

A2LA has accredited

## PIONEER LABORATORY

Doha, Qatar

for technical competence in the field of

### Construction Materials Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system

(refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

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Presented this 13th day of July 2020.

Vice President, Accreditation Services For the Accreditation Council Certificate Number 4913.01 Valid to July 31, 2022

For the tests to which this accreditation applies, please refer to the laboratory's Construction Materials Scope of Accreditation.



# **Accredited Laboratory**

A2LA has accredited

## PIONEER LABORATORY

Doha, Qatar

for technical competence in the field of

### Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system

(refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

Presented this 13th day of July 2020.

Vice President, Accreditation Services For the Accreditation Council Certificate Number 4913.03 Valid to July 31, 2022



### SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

PIONEER LABORATORY COMPANY Building No 4, Street 3117, Area 91 Birakt Alawamer, Doha, Qatar Hussam Shabban Phone: +974 44690362 hshabban@pioneerlaboratory.com

#### CONSTRUCTION MATERIALS TESTING

Valid To: July 31, 2022 Certificate Number: 4913.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory for:

Test Method:	Test Description:
Aggregates:	
ASTM C40/C40M	Organic Impurities in Fine Aggregates for Concrete
ASTM C88	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium
	Sulfate
ASTM C117	Materials Finer than 75-um (No. 200) Sieve in Mineral Aggregates by
	Washing
ASTM C123	Lightweight Particles in Aggregate
ASTM C127	Density, Relative Density (Specific Gravity), and Absorption of
	Coarse Aggregate
ASTM C128	Density, Relative Density (Specific Gravity), and Absorption of Fine
	Aggregate
ASTM C131	Resistance to Degradation of Small-Size Coarse Aggregate by
	Abrasion and Impact in the Los Angeles Machine
ASTM C136/C136M	Sieve Analysis of Fine and Coarse Aggregates
ASTM C142	Clay Lumps and Friable Particles in Aggregates
ASTM C535	Resistance to Degradation of Large-Size Coarse Aggregate by
	Abrasion and Impact in the Los Angeles Machine
ASTM D75/D75M <sup>I</sup>	Sampling Aggregates
ASTM D2419	Sand Equivalent Value of Soils and Fine Aggregate
ASTM D4791	Flat Particles, Elongated Particles, or Flat and Elongated Particles in
	Coarse Aggregate
ASTM D5821	Determining the Percentage of Fractured Particles in Coarse Aggregate
BS 812 Part 2 Section 5.3	Testing aggregates
	Part 2: Methods for determination of density
	Clause 5.3: Method for aggregates all larger than 10mm
BS 812 Part 2	Testing aggregate
Sections 5.4 and 5.5	Part 2: Methods for determination of density
STUDIES OF I MILE OF	Particle density and water absorption of aggregate between 40mm
	and 5mm
	Particle density and water absorption 10mm aggregate & smaller

(A2LA Cert. No. 4913.01) Revised 05/26/2021

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Test Method:	Test Description:	
BS 812 Section 103.1	Testing Aggregates Method for determination of particle size distribution. Sieve tests	
BS 812 Part 102	Testing Aggregates Methods for sampling Sampling coarse, fine and all-in aggregates-from heaps	
BS 812 Part 105 Section 105.1	Testing Aggregates Part 105: Methods for determination of particle shape. Flakiness index	
BS 812 Part 105 Section 105.2	Testing Aggregates  Methods for determination of particle shape- elongation index	
BS 812 Part 109	Testing Aggregates Methods for determination of moisture content (drying oven)	
BS 812 Part 110	Testing Aggregates Methods for determination of aggregate crushing value (ACV)	
BS 812 Part 111	Testing Aggregates Methods for Determination of Ten Per Cent Fines Value (TFV)	
BS 812 Part 112	Testing Aggregates  Method for determination of Aggregate Impact Value (AIV)	
BS 812 Part 117	Testing Aggregates Method for determination of water-soluble chloride salts	
BS 812 Part 118	Testing Aggregates Methods for determination of sulphate content	
BS 1377 Part 3 Section 7.6	Methods of test for soils for civil engineering purposes Chemical and electro-chemical tests Determination of the sulphate content of soil and ground water Preparation of soil and its acid extract)	
BS 1377 Part 3 Clause <del>7.3</del>	Methods of test for soils for civil engineering purposes Chemical and electro-chemical tests Water soluble sulfate content	
BS 1377 Part 3 Clause 4	Methods of test for soils for civil engineering purposes Chemical and electro-chemical tests- Determination of the organic matter content	
BS 1377 Part 3 Clause 9.2	Methods of test for soils for civil engineering purposes Chemical and electro-chemical tests for Water soluble chloride	
BS 1377 Part 3 Section 9.3	Methods of test for soils for civil engineering purposes Chemical and electro-chemical tests Determination of the chloride content- Determination of acid soluble chloride content	
	Tests for geometrical properties of aggregates  Determination of shell content. Percentage of shells in coarse aggregates	
BS EN 933-1	Tests for geometrical properties of aggregates. Determination of particle size distribution. Sieving method	
BS EN 933-8	Tests for geometrical properties of aggregates. Assessment of fines. Sand equivalent test	
BS EN 1097 Part 6	Tests for mechanical and physical properties of aggregates.  Determination of particle density and water absorption	



Test Method:	Test Description:
BS EN 1744 Part 1	Tests for chemical properties of aggregates. Chemical analysis
	Sulphate content/acid soluble in aggregate
BS EN 1744 Part 5	Tests for chemical properties of aggregates
	Determination of acid soluble chloride salts
Asphalt:	
ASTM D5/D5M	Penetration of Bituminous Materials
ASTM D36	Softening Point of Bitumen (Ring & Ball Apparatus)
ASTM D70	Density of Semi-Solid Bituminous Materials (Pycnometer Method)
ASTM D95	Water in Petroleum Products and Bituminous Materials by Distillation
ASTM D402/D402M	Distillation of Cutback Asphalt
ASTM D546	Sieve Analysis of Mineral Filler for Bituminous Paying Mixtures
ASTM C702 <sup>1</sup>	Reducing Samples of Aggregate to Testing Size
ASTM D979/D979M	Sampling Bituminous Paving Mixtures
ASTM D1188	Bulk Specific Gravity and Density of Compacted Bituminous Mixtures
ASTWI DITO	Using Coated Samples
ASTM D2041	Theoretical Maximum Specific Gravity and Density of Bituminous
	Paving Mixtures
ASTM D2172	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
ASTM D2726	Bulk Specific Gravity and Density of Non-Absorptive Compacted
	Bituminous Mixtures
ASTM D2995	Practice for Estimating Application Rate and Residual Application
	Rate of Bituminous Distributors
ASTM D3203	Percent Air Voids in Compacted Dense and Open Bituminous
	Paving Mixtures
ASTM D3549	Thickness or Height of Compacted Bituminous Paving Mixture
	Specimens
ASTM D5361 <sup>1</sup>	Sampling Compacted Bituminous Mixtures for Laboratory
	Testing
ASTM D5444	Mechanical Size Analysis of Extracted Aggregate
ASTM D6926	Preparation of Bituminous Specimens Using Marshall Apparatus
ASTM D6927	Marshall Stability and Flow of Bituminous Mixtures
BS EN 1426	Bitumen and bituminous binders. Determination of needle penetration
BS EN 12697 Part 1	Bituminous mixtures-Test methods for hot mix asphalt Soluble binder
Clause B.1.5	content
BS EN 12697 Part 2	Bituminous mixtures-Test method for hot mix asphalt
	Determination of particle size distribution
BS EN 12697 Part 6	Bituminous Mixtures-Test methods for hot mix asphalt
<u> </u>	Determination of bulk density of bituminous specimen
BS EN 12697 Part 13	Bituminous Mixtures-Test methods for hot mix asphalt Temperature
	measurement
BS EN 12697 Part 27	Bituminous Mixtures-Test methods for hot mix asphalt
Clauses 4.3, 4.5 & 4.7	Asphalt Sampling
BS EN 12697 Part 28	Bituminous mixtures-Test methods for hot mix asphalt
	Preparation of samples for determining binder content, water content and grading



Test Method:	Test Description:	
BS EN 12697 Part 29	Bituminous Mixtures-Test methods for hot mix asphalt Determination of the dimensions of a bituminous specimen	
BS EN 12697 Part 30	Bituminous Mixtures-Test methods for hot mix asphalt Specimen preparation by impact compactor	
BS EN 12697 Part 34	Bituminous Mixtures-Test methods for hot mix asphalt Marshall Test Marshall stability and flow	
BS EN 12697 Part 36 Cl 4.1	Bituminous Mixtures-Test methods for hot mix asphalt Part 36: Determination of the thickness of a bituminous pavement	
Cement:	20	
ASTM C114 (Clause 18)	Chemical Analysis of Hydraulic Cement	
ASTM C151/C151M	Autoclave Expansion of Hydraulic Cement	
ASTM C187	Amount of Water Required for Normal Consistency of Hydraulic Cement Paste	
ASTM C188	Density of Hydraulic Cement	
ASTM C191	Time of Setting of Hydraulic Cement by Vicat Needle	
ASTM C204	Fineness of Hydraulic Cement by Air-Permeability Apparatus	
ASTM C989	Compressive strength for Ground Granulated Blast Furnace Slag	
BS EN 196 Part 3-Cl.7	Determination of Soundness of Cement	
	v O	
Concrete:		
ASTM C39/C39M	Compressive Strength of Cylindrical Concrete Specimens	
ASTM C42/C42M	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete	
ASTM C143/C143M <sup>1</sup>	Slump of Hydraulic-Cement Concrete	
ASTM C172/C172M <sup>1</sup>	Sampling Freshly Mixed Concrete	
ASTM C231/C231M <sup>1</sup>	Air Content of Freshly Mixed Concrete by the Pressure Method	
ASTM C617	Capping Cylindrical Concrete Specimens	
ASTM C1064/C1064M <sup>1</sup>	Temperature of Freshly Mixed Hydraulic-Cement Concrete	
ASTM C1202	Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration	
BS 2484	Specification for straight concrete and clayware cable covers Impact resistance of concrete cable covers	
BS 1881 Part 122	Testing concrete Method for determination of water absorption	
BS 1881 Part 124 Clause 12.1	Testing Concrete  Methods for analysis of hardened concrete (Determination of Chloride content in hardened concrete)	
BS 1881 Part 124 Clause 12.2	Testing Concrete Methods for analysis of hardened concrete (Determination of Sulphate content in hardened concrete)	
BS 1881 Part 208	Testing concrete Recommendations for the determination of the initial surface absorption of concrete	
BS 6717 Part 1 Annex A	Precast concrete paving blocks. Specification for paving blocks	



Test Method:	Test Description:	
BS 6717 Part 1 Annex B	Precast concrete paving blocks.	
	Specification for paving blocks- Determination of	
	compressive strength	
BS EN 12350 Part 1	Testing fresh concrete.	
	Sampling	
BS EN 1338 Annex E	Concrete paving blocks.	
	Requirements and test methods	
	Determination of total water absorption	
BS EN 1340 Annex E	Concrete kerb units. Requirements and test methods (Determination of total water absorption)	
BS EN 1340 Annex F	Concrete kerb units. Requirements and test methods (Measurement of Bending strength)	
BS EN 12390 Part 1	Testing hardened concrete	
	Shape Dimensions and other requirements for	
	specimens and molds	
BS EN 12390 Part 2 <sup>1</sup>	Testing hardened concrete	
	Making and curing specimens for strength tests	
BS EN 12390 Part 3	Testing hardened concrete Compressive strength of test specimens	
BS EN 12390 Part 7	Testing hardened concrete	
	Density of hardened concrete	
BS EN 12350 Part 2 <sup>1</sup>	Testing fresh concrete Slump test	
BS EN 12350 Part 5 <sup>1</sup>	Testing fresh concrete	
	Flow table test	
BS EN 12504 Part 2	Testing concrete in structures Non-destructive Testing. Determination of rebound number	
NT Build 492	Hardened Concrete Chloride Ion Migration	
BS EN 13395-2	Determination of workability (Test for flow of grout or Mortar)	
BS EN 445: Cl.# 4.3	Grout for Pre-stressing Tendons-Test Methods determination of fluidity of grout (By cone method)	
BS EN 12390-8	Depth of Penetration of water under pressure	
S B1 (123) 0 0	O'F THE STATE OF T	
Masonry:		
ASTM C140	Sampling and Testing Concrete Masonry Units and Related Units	
BS 6073 Part 1 Appendix B	Precast concrete masonry units	
	Specification for precast concrete masonry units Appendix B:	
	Determination of compressive strength	
BS EN 772 Part 1	Methods of test for masonry units Determination of compressive strength	
BS EN 772 Part 3 & 11	Methods of test for masonry units Part 3: Determination of net volume and percentage of voids of clay	
	masonry units by hydrostatic weighing	
<b>19</b>	Part 11: Determination of water absorption of aggregate concrete,	
	autoclaved aerated concrete, manufactured stone and natural stone	
	masonry units due to capillary action and the initial rate of water	
	absorption of clay masonry units	
BS EN 1340 Annex E	Concrete kerb units Requirements and	
	test methods	
BS EN 1338 Annex F	Tensile Strength of Paving Blocks	



Test Method:	Test Description:	
BS EN 196 Part 7	Taking and Preparing Samples of Cement	
Road and Pavement Surfaces	<u>.</u>	
ASTM D92	Flash Point, Cleveland Open Cup	
ASTM D140	Sampling of Binders	
ASTM D2042	Solubility in Trichloroethylene	
ASTM D2950	Density of Bituminous Concrete in Place by Nuclear Methods	
ASTM D4402/D4402M	Viscosity Determination Using Rotational Viscometer (RV)	
ASTM D5581	Resistance to Plastic Flow Using Marshall Apparatus (6 in. Specimen)	
ASTM D6931	Indirect Tensile (IDT) Strength of Bituminous Mixtures	
ASTM E303	Surface Frictional Properties Using the British Pendulum Tester	
ASTM E1703/E1703M	Measuring Rut-Depth of Pavement Surfaces Using a Straightedge	
BS 2000-35	Flash Point (Open) of Thermoplastic Material	
BS 2000-58	Softening Point (Ring and Ball Method) of Thermoplastic Material	
BS 3262 Part 3-Ap. B	Dry Film Thickness	
BS 3262 Part 1 Ap. D	Glass Bead Content of Thermoplastic Material	
BS 3262 Part 1-Ap. J	Measurement of Skid Resistance	
BS 3262 Part 3 Ap. C	Determination of Density of Thermoplastic Material	
BS 3262 Part 1 Ap. H	Flow Resistance of Thermoplastic Material	
BS 6088 Appendix B	Particle Size Distribution of Glass Beads	
BS EN 13197 Annex C.1.3	Wet Film Thickness by Notch Gauge	
Soils:	.0	
ASTM D1140	Amount of Material in Soils Finer than No. 200 (75-µm) Sieve	
ASTM D1556 <sup>1</sup>	Density and Unit Weight of Soil in Place by Sand-Cone Method	
ASTM D1557	Laboratory Compaction Characteristics of Soil Using Modified Effort	
ASTM D1883	CBR (California Bearing Ratio) of Laboratory-Compacted Soils	
ASTM D2216	Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass	
ASTM D4318	Liquid Limit, Plastic Limit, and Plasticity Index of Soils	
ASTM D4429 <sup>1</sup>	CBR (California Bearing Ratio) of Soils in Place	
ASTM D4543	Preparing Rock Core Specimens to Dimensional and Shape Tolerances	
ASTM D4718/D4718M	Unit Weight and Water Content for Soils Containing Oversize Particles	
ASTM D6913	Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis	
ASTM D6938 <sup>1</sup>	In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	
ASTM D7012 Method C	Compressive Strength of Rock Core Specimen	
ASTM G57	Electrical Resistivity Test	
ASTM D6951	Standard test method for use of the Dynamic Con Penetrometer	
	in shallow pavement application	
ASTM D4373	Standard Test Method for Rapid Determination of Carbonate Content of Soil	
BS 1377 Part 9 Clause 2.5	Methods of test for soils for civil engineering purposes In-situ tests- Nuclear methods suitable for fine, medium and coarse- grained soils (Filed Density test by Nuclear Gauge FDT)	

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Test Method:	Test Description:
BS1377 Part 2 Clause 3	Methods of test for soils for civil engineering purposes
	Part 2: Classification tests
	Clause 3: Determination of moisture content
BS 1377 Part 2 Clause 4.3	Methods of test for Soils for civil engineering purposes
	Part 2: Classification tests
	Clause 4.3: Determination of the liquid limit - Cone
	penetrometer method (definitive method)
BS 1377 Part 2 Clauses	Methods of test for Soils for civil engineering purposes
5.3 & 5.4	Part 2: Classification tests
	Clause 5: Determination of the plastic limit and plasticity index:
	Method for plastic limit
	Derivation of plasticity index and liquidity index
BS 1377 Part 2 Clauses	Methods of test for Soils for civil engineering purposes
9.2 & 9.3	Part 2: Classification tests Clause 9: Determination of particle size
	distribution: Wet sieving method
	Dry Sieving Method
BS 1377 Part 4 Test 7	Methods of test for Soils for civil engineering purposes
	Compaction-related tests.
	Determination of the California Bearing Ratio (CBR)
BS 1377 Part 4 Clauses	Methods of test for Soils for civil engineering purposes
3.5 & 3.6	Part 4: Compaction-related tests.
	Clause 3: Determination of dry density/moisture content relationship:
	Method using 4.5 kg rammer for soils with particles up to medium-
	gravel size
	Method using 4.5 kg rammer for soils with some coarse gravel-
	size particles
BS 1377 Part 9 Clauses	Methods of test for soils for civil engineering purposes
2.1 & 2.2	In-situ tests Clause 2: Sand replacement method
	suitable for fine, medium and coarse-grained soils (large and
	small pouring cylinder method)
BS 1377 Part 9 Clause 4.1	Methods of test for soils for civil engineering purposes
	Part 9: In-situ tests
×	Clause 4.1: Determination of the vertical deformation and
	strength characteristics of soil by the plate loading test

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### SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

### PIONEER LABORATORY COMPANY Building No 4, Street 3117, Area 91 Birakt Alawamer, Doha, Qatar Hussam Shabban Phone: +974 44690362 hshabban@pioneerlaboratory.com

CHEMICAL

Valid To: July 31, 2022 Certificate Number: 4913.03

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory for testing on the following environmental and construction-related samples of soils and water:

TE ANT ALL	T (D)
Test Method:	Test Description:
Chemical Tests:	
BS EN 196 Part 21-Cl. 4	Chloride Content
BS EN 196 Part 2-Cl. 7	Loss on Ignition
APHA/AWWA 2130 B	Turbidity
23 <sup>rd</sup> Edition 2017	T + 10 KI
APHA/AWWA 2540-B	Total Solids
23 <sup>rd</sup> Edition 2017	
APHA/AWWA 2540-D	Total Suspended Solids (TSS)
23 <sup>rd</sup> Edition 2017	
APHA/AWWA 2540-C	Total Dissolved
23 <sup>rd</sup> Edition 2017	Solids (TDS)
APHA/AWWA 5520 D	Oil & grease
23 <sup>rd</sup> Edition 2017	
APHA/AWWA 4500- SO4 <sup>2-</sup>	Sulfate
23 <sup>rd</sup> Edition 2017	
APHA/AWWA-9223 B	Total Coliforms
Method #4C	
23rd Edition 2017	
IDEXX method C	
APHA/AWWA-9223 B	Fecal Coliform
Method #4C	
23 <sup>rd</sup> Edition 2017	
IDEXX method C	
APHA/AWWA-9223 B	E-Coli
Method #4C	
23 <sup>rd</sup> Edition 2017	
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	Test Method:	Test Description:
	Chemical (Water):	
	BS 1377-3 Clause 9.2.5 & 9.2.7	Methods for test for soils for civil engineering purposes Part 3: Chemical and electro-chemical test. Water soluble chloride content
	BS 1377 Part 3 Clause 11	Methods of test for soils for civil engineering purposes Part 3: Chemical and electro-chemical tests Determination of total dissolved solids
	BS 1377 Part 3 Clause 12	Methods of test for soils for civil engineering purposes Part 3: Chemical and electro-chemical tests (Determination of the pH value)
	APHA/AWWA 2510-B 23rd Edition 2017	Electrical Conductivity
	APHA/AWWA 4500-H+B 23rd Edition 2017	pH value
E+3	ample certificate for	the current certificates
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