SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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CONSTRUCTION MATERIALS TESTING

Valid To: December 31, 2026 Certificate Number: 4881.01

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

| **Test Method:** | **Test Description:** |
|---|---|
| **Aggregates:** | |
| ASTM C29/C29M | Bulk Density and Voids in Aggregates |
| ASTM C88/C88M | Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate |
| ASTM C117 | Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing |
| ASTM C123/C123M | Lightweight Particles in Aggregate |
| ASTM C127 | Density, Relative Density (Specific Gravity), and Absorption ofCoarse 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/C142M | 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 C702/702M | Reducing Samples of Aggregate to Testing Size |
| ASTM D75/D75M[1] | 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 | Fractured Particles in Coarse Aggregate |
| BS 812 Part 2 Clause 5.4 | Testing aggregates<br>Part 2: Methods for determination of Density (Particle density and water absorption) |
| BS 812 Part 102[1] | Testing aggregate<br>Part 102: methods for Sampling |
| BS 812 Part 103 Section 103.1 | Testing aggregates: Part 103: Method for determination of particle size distribution. Sieve tests |



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| Test Method: | Test Description: |
|---|---|
| BS 812 Part 105 Section 105.1 | Testing aggregates<br>Part 105: Methods for determination of particle shape. Flakiness index |
| BS 812 Part 105 Section 105.2 | Testing aggregates<br>Part 105: Methods for determination of particle shape. Elongation index of coarse aggregate |
| BS 812 Part 109 | Testing aggregates<br>Part 109: Methods for determination of moisture content (drying oven) |
| BS 812 Part 110 | Testing aggregates<br>Part 110: Methods for determination of aggregate crushing value (ACV) |
| BS 812 Part 111 | Testing aggregates<br>Part 111: Methods for Determination of Ten Per Cent Fines Value (TFV) |
| BS 812 Part 112 | Aggregate impact value |
| BS EN 933 Part 1 | Tests for geometrical properties of aggregates<br>Part 1: Determination of particle size distribution. Sieving method |
| BS EN 933 Part 3 | Tests for geometrical properties of aggregates<br>Part 3: Determination of particle shape. Flakiness index |
| BS EN 933 Part 4 | Tests for geometrical properties of aggregates<br>Part 4: Determination of particle shape. Shape index (ElongationIndex) |
| BS EN 933-7 | Shell Content Percentage of Shells in Coarse Aggregates |
| BS EN 1097-2 | Methods for the determination of resistance to fragmentation |
| BS EN 1097-6 | Determination of particle density and water absorption |
| **Asphalt:** | |
| ASTM D5 | Penetration of Bituminous Materials |
| ASTM D36 | Softening Point of Bitumen (Ring-and-Ball Apparatus) |
| ASTM D140/D140M[1] | Sampling Asphalt Materials |
| ASTM D546 | Sieve Analysis of Mineral Filler |
| ASTM D979/D979M[1] | Sampling Bituminous Paving Mixtures |
| ASTM D1188 | Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples |
| ASTM D2041/D2041M | Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures |
| ASTM D2726/D2726M | Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures |
| ASTM D2950 | Nuclear Density of Asphalt |
| ASTM D2995 | Estimating Application Rate and Residual Application Rate of Bituminous Distributors |
| ASTM D3203/D3203M | Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures |
| ASTM D3549/D3549M | Thickness or Height of Compacted Asphalt Mixture Specimens |
| ASTM D5361/D5361M[1] | Sampling Compacted Bituminous Mixtures for Laboratory Testing |
| ASTM D5444 | Mechanical Size Analysis of Extracted Aggregate |
| ASTM D 3665 | Random Sampling of Construction Materials |
| ASTM D6752/D6752M | Bulk Specific Gravity and Density of Compacted Asphalt Mixtures Using Vacuum Sealing |

| Test Method: | Test Description: |
|---|---|
| ASTM D6857 | Maximum Specific Gravity and Density of Asphalt Mixtures using Automatic Vacuum Sealing Method |
| ASTM D6926 | Preparation of Asphalt Mixture Specimens Using Marshall Apparatus |
| ASTM D6927 | Marshall Stability and Flow of Asphalt Mixtures |
| ASTM D6951/D6951M[1] | Use of the Dynamic Cone Penetrometer in Shallow Pavement Applications |
| ASTM D7227 | Rapid Drying of Compacted Asphalt Specimens Using VacuumDrying Apparatus |
| AASHTO R 47 | Reducing Sample of HMA to Test Size |
| ASTM D70 | Density of Semi-Solid Bituminous Materials (Pycnometer Method) |
| ASTM D2172 | Quantitative Extraction of Asphalt Binder from Asphalt Mixtures |
| ASTM D2726, Clause 10.2 | Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures (Determination of Bulk Density) |
| BS EN 12697-13 | Bituminous mixtures. Test methods for hot mix asphalt. Temperature measurement |
| **Cement:** | |
| BS EN 196-1 | Determination of cement strength |
| ASTM C109/C109M | Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or[50 mm] Cube Specimens) |
| ASTM C183/C183M[1] | Sampling and the Amount of Testing of Hydraulic Cement |
| ASTM C187 | Amount of Water Required for Normal Consistency of Hydraulic Cement Paste |
| ASTM C191 | Time of Setting of Hydraulic Cement by Vicat Needle |
| BS EN 196 Part 3 +A1:2005 | Determination of setting times and soundness |
| BS EN 196 Part 7[1] | Methods of taking and preparing samples of cement |
| BS EN 196 Part 6, Section 4.0 | Methods of testing cement<br>Part 6: Determination of fineness |
| **Concrete:** | |
| ASTM C31/C31M[1] | Making and Curing Concrete Test Specimens in the Field |
| ASTM C39 | Compressive Strength of Cylindrical Concrete Specimens |
| ASTM C42/C42M | Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete |
| ASTM C138/ C138M | Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete |
| ASTM C140/C140M[1] | Sampling and Testing Concrete Masonry Units and Related Units |
| ASTM C143/C143M[1] | Slump of Hydraulic-Cement Concrete |
| ASTM C172[1] | Sampling of Freshly Mixed Concrete |
| ASTM C231/ C231M[1] | Air Content of Freshly Mixed Concrete by the Pressure Method |
| ASTM C496/C496M | Splitting Tensile Strength of Cylindrical Concrete Specimens |
| ASTM C617/C617M | Capping Cylindrical Concrete Specimens |
| ASTM C642 | Density, Absorption, and Voids in Hardened Concrete |
| ASTM C805/C805M[1] | Rebound Number of Hardened Concrete |
| ASTM C1064[1] | Temperature of Freshly Mixed Hydraulic-Cement Concrete |
| ASTM C1202 | Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration Rapid chloride permeability test (RCPT) |

| Test Method: | Test Description: |
|---|---|
| ASTM D4541[1] | Pull-Off Strength of Coatings Using Portable Adhesion Testers |
| ASTM D7234[1] | Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers |
| ASTM E488[1] | Strength of Anchors in Concrete Elements |
| ASTM C232 | Bleeding of Concrete |
| BS 1881, Parts 111, 114, and 116[1] | Testing concrete.<br>Part 111: Method of normal curing of test specimens (20°C method)<br>Part 114: Testing concrete Methods for determination of density of hardened concrete<br>Part 116: Method for determination of compressive strength ofconcrete cubes |
| BS 1881 Part 122 | Testing concrete<br>Part 122: Method for determination of water absorption |
| BS 1881 Part 208 | Testing concrete Part 208: Recommendations for the determination of the initial surface absorption of concrete |
| BS 8204-1: 2003 | Screed test |
| BS 6717: 2001- Annex B | Annex B: Measurement of the dimensions of a single paving block |
| BS 6717: 2001- Annex E | Precast, unreinforced concrete paving blocks — Requirements and test methods Annex E: Method for measuring tensile splitting strength |
| BS EN 1367-4 | Determination of drying shrinkage |
| BS EN 772-11/BS EN 771-3 | Determination of Coefficient of Water Absorption due to Capillary Action of Masonry Units (And other related materials) |
| BS EN 1338 Annex E | Determination of Total Water Absorption of Paving Blocks |
| BS EN 1338 Annex F | Measurement of the Strength of Paving Block |
| BS EN 1339 Annex E | Determination of Total Water Absorption of Paving Flags |
| BS EN 1340 Annex C | Measurement of Dimensions for Concrete Kerb Units |
| BS EN 1340 Annex E | Determination of Total Absorption of Concrete Kerb Units |
| BS EN 12350 Part 1[1] | Testing fresh concrete. Part 1: Sampling |
| BS EN 12350 Part 2[1] | Testing fresh concrete Part 2: Slump test |
| BS EN 12350 Part 5[1] | Testing fresh concrete Part 5: Flow table test |
| BS EN 12350 Part 6[1] | Testing fresh concrete Part 6: Density |
| BS EN 12350 Part 7[1] | Testing fresh concrete Part 7: Air content. Pressure methods |
| BS EN 12390, Parts 1, 3, and 7 | Testing hardened concrete<br>Part 1: Shape, dimensions and other requirements for specimens and molds<br>Part 3: Compressive strength of test specimensPart 7: Density of hardened concrete |
| BS EN 12390 Part 2[1] | Testing hardened concrete<br>Part 2: Making and curing specimens for strength tests |
| BS EN 12504 Part 1[1] | Testing concrete in structures<br>Part 1: Cored specimen– taking, examining and testing in compression |
| BS EN 12390 Part 8 | Testing hardened concrete. Part 8: Depth of penetration of waterunder pressure |
| BS EN 13286-41 | Determination of the Compressive Strength of Hydraulically Bound Mixtures |

| Test Method: | Test Description: |
|---|---|
| BS EN 13286-51 | Method for the manufacture of test specimens of hydraulic bound mixtures u sing vibrating hammer compaction |
| BS EN 13748 Part 1 5.5/5.8 | Water Absorption of Terrazzo Tiles |
| DIN 1048 Part 5 | Testing Concrete; Testing of Hardened Concrete (specimens prepared in mold) Part 5: Water Permeability Test of Hardened Concrete |
| RILEM TC14 CPC 11.3 | Absorption of Water by Concrete by Immersion Under Vacuum |
| NT Build 492-11 | Chloride ion migration |
| BS 6073 Appendix A | Precast concrete masonry units, measurement of dimension |
| BS 6073 Appendix B | Precast concrete masonry units, determination of compressive strength |
| BS 6717 Part 1 Ann. A & B | Precast concrete paving blocks<br>Part 1: Determination of compressive strength |
| ASTM C1621/C1611/C1611M | Passing Ability of Self-Consolidating Concrete by J-Ring1 /Slump flow |
| ASTM C1252 | Uncompacted Void Content of Fine Aggregate (as Influenced by Particle Shape, Surface Texture, and Grading) |
| BS EN 12350:9 | Determining the V-funnel flow time for self-compacting concrete |
| BS EN 12350:10 | Determining the passing ability ratio for self-compacting concrete using the L box test |
| ASTM C403 | Time of Setting of Concrete Mixtures by Penetration Resistance |
| **Road Markings:** | |
| BS 3262 Part 1 Appendix J | Road marking materials. Road marking performance for road users Determination of Skid Resistance |
| ASTM D 6132[1] | Nondestructive Measurement of Dry a film Thickness of Applied Organic Coatings Using Ultrasonic Coating Thickness Gauge |
| ASTM D7091[1] | Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, NonconductiveCoatings Applied to Non-Ferrous Metals |
| ASTM E1710 | Measurement of Retroreflective Pavement Marking Materials with CEN Prescribed Geometry Using a Portable Retro reflectometer |
| ASTM E2302 | Measurement of the Luminance Coefficient under Diffuse Illuminationof Pavement Marking Materials Using a Portable Reflectometer |
| BS 3262 Part 3 | Hot-applied thermoplastic road-marking materials<br>Part 3: Specification for application of material to road surfaces Determination of Thickness of Road Marking Materials |
| BS EN 1436 +A1 | Road marking materials. Road marking performance for road users Determination of Skid Resistance |
| BS 1377 Part 9 Section 4[1] | Methods of test for soils for civil engineering purposes<br>Part 9: In-situ tests In-situ vertical deformation and strength tests… Site Test |
| SOP/OPN/22[1] | Surface Irregularities in Concrete & Bituminous Road Surfaces By Travelling Beam Device |
| **Soils:** | |
| ASTM D854 | Specific Gravity of Soil Solids by Water Pycnometer |
| ASTM D1140 | Amount of Material in Soils Finer than No. 200 (75-m) Sieve |
| ASTM D1556[1] | Density and Unit Weight of Soil in Place by Sand-Cone Method. |

| Test Method: | Test Description: |
|---|---|
| ASTM D1557 | Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN-m/m3)) |
| 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[1] (2009a) | CBR (California Bearing Ratio) of Soils in Place … Site Test |
| ASTM D4718 | Correction of Unit Weight and Water Content for Soils Containing Oversize Particles |
| ASTM D6913 | Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis |
| ASTM D6938[1] | In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)…Site Test |
| BS EN 933-8 | Assessment of fines- sand equivalent |
| BS1377 Part 2 Clause 3 | Methods of test for soils for civil engineering purposes<br>Part 2: classification tests (Determination of moisture content) |
| BS 1377 Part 2 Clause 4.3 | Methods of test for soils for civil engineering purposes<br>Part 2: Classification tests (Determination of Liquid Limit (Cone Penetrometer)) |
| BS 1377 Part 2 Section 4.5 | Methods of test for soils for civil engineering purposes Part 2: Classification tests (Atterberg Casagrande Method) |
| BS 1377 Part 2 Clauses 5.3 & 5.4 | Methods of test for soils for civil engineering purposes<br>Part 2: Classification tests (Determination of Plastic Limit and Plasticity Index) |
| BS 1377 Part 2 Clauses 9.2 & 9.3 | Methods of test for soils for civil engineering purposes Part 2: Classification tests (Determination of particle size distribution) |
| BS 1377 Part 4 Clauses 3.5 and 3.6 | Methods of test for soils for civil engineering purposes<br>Part 4: Compaction-related tests (Determination of dry density / moisture content relationship) |
| BS 1377 Part 4 Clause 7 | Methods of test for soils for civil engineering purposes<br>Part 4: Compaction-related tests (Determination of California bearing ratio) |
| BS 1377 Part 9 Clauses 2.1 & 2.2[1] | Methods of test for soils for civil engineering purposes Part 9: In-situ tests (Sand replacement method suitable for<br>fine, medium and coarse-grained soils (large and small pouring cylinder method).. Site Test |
| BS 1377 Part 9 Clause 2.5[1] | Methods for test for soils for civil engineering purposes<br>Part 9: In-situ tests (Filed Density test by Nuclear Gauge FDT)... Site Test |
| BS 1377 Part 9 Section 4.3[1] | Methods of test for soils for civil engineering purposes Part 9: In-situ tests Determination of the in-situ California<br>Bearing Ratio (CBR).. Site Test |
| BS EN 13036-7 | Irregularity Measurement of a Pavement Courses by Using a Straightedge… Site Test |
| ASTM E1703/E1703M | Measuring Rut-Depth of Pavement Surfaces using a Straightedge… Site Test |

SPECIFICATION

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| BS 1924-1 | General requirements, sampling, sample preparation and test on materials before stabilization |

[1] This laboratory performs field testing activities for these tests.

# Accredited Laboratory

A2LA has accredited

## AL BARAHA TECHNICAL LABORATORIES

*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*).

Presented this 30th day of December 2024.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 4881.01
Valid to December 31, 2026

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