05//11/2018

تعميم فني رقم (26)

Technical circular no (26)

قائمة أشغال للاختبارات المعتمدة لدى المختبرات المحايدة رقم (2018/10)

Ashghal List of Approved Tests in Independent Labs (2018/10)

تحية طيبة وبعد،

بناءً على التعميم رقم 28 لسنة 2016 وعلى التقييم الدوري لفريق مراقبة المختبرات التابع لإدارة الجودة والسلامة، نرفق لسيادتكم تحديث قائمة الاختبارات المعتمدة في مشاريع هيئة الأشغال العامة.

أهم التحديثات التي تمت هي:

1- اضافه مختبرات المواصفات التركية (TSE) الى قائمة المختبرات الخارجية.

2- حذف مختبر الهندسة والأبحاث العالمية من القائمة بعد أغلاقه.

3- اضافة اختبارات جديدة للمختبرات التالية وذلك بعد حصولهم على اعتماد الـ ISO17025 في هذه الاختبارات:

- مختبرات الدوحة الفنية (DTL).
- شركة فوجرو وشبه الجزيرة للخدمات (Fugro)
- مختبرات قطر الصناعية (QIL)
- مختبرات قطر الهندسية (QEL)

4- تطبيق نظام النجمة وتحديث نطاق الاختبارات لمختبرات المواقع بما يتوافق مع متطلبات التعميم الفني رقم 2018/22.

Dear All ,,,

With reference to memorandum No. 28 - 2016 and regular assessment carried out by the Quality and Safety Dept. inspection team, you will find attached the updated list of approved tests, which used in Public Works Authority (Ashghal) projects. The basic amendments can be summarized as follows:

1- **Add Turkish Standards Institution Laboratories (TSE) in Turkey to the abroad Labs list.**

2- **Based on the laboratory closing; Engineering Research International laboratory (ERI) was removed from the list.**

3- **New tests were approved to following laboratories after being accredited by ISO17025 in these tests:**
   - Doha Technical laboratories.
   - Fugro Peninsular.
   - Qatar industrial laboratories.
   - Qatar Engineering laboratories.

4- **Apply the star policy and Update the testing scope for all the site laboratories according to the requirement of technical circular no 22/2018.**

قطـــر تستحـــق الأفضـــل
Qatar Deserves The Best

يمكنكم الاطلاع والحصول على نسخة من قائمة الاختبارات المعتمدة من خلال موقع الهيئة
http://www.ashghal.gov.qa/services/customerzone

لمزيد من المعلومات يمكنكم الاتصال بإدارة الجودة والسلامة على:

ت: 44950200 - فاكس: 44951200

The list of approved tests can be downloaded from Ashghal website: http://www.ashghal.gov.qa/services/customerzone

For further information, please contact Quality and Safety Dept. through:

Tel: 44950200 - Fax: 44951200

م. خالد محمد العمادي
Eng. Khalid Mohd. Al Emadi
مدير إدارة الجودة والسلامة
Quality & Safety Department Manager

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1. Soil Tests

No.	Test	Standard	Laboratory															
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
1.1	Reducing Samples to Testing Size	ASTM C702	√	√	√	√	√	√	-	√	√	√	√	-	-	√	√	√	√
1.2	Determination of Moisture Content	ASTM D2216	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√
1.3	Particle Size Distribution	ASTM D6913	-	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√
1.4	Materials Finer than No. 200 (0.075mm) Sieve	ASTM D1140	√	√	√	√	√	√	-	√	√	√	√	-	√	√	√	-	√
1.5	Liquid Limit, Plastic Limit and Plasticity Index of Soil	ASTM D4318	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	√
1.6	Lab Compaction Test using Modified Effort	ASTM D1557	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√
1.7	Correction of Density and Water Content for Soils	ASTM D4718	-	√	√	√	√	√	-	√	√	-	√	√	√	√	√	-	√*
1.8	Field Density (Sand Cone)	ASTM D1556	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√*
1.9	Field Density (Nuclear)	ASTM D6938	-	√	√	√	√	√	-	√	√	-	-	√	√	√	√	-	-
1.10	In Place Moisture Content (Calcium Carbide Tester)	ASTM D4944	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√*

Soil Tests (Cont.)

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No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
1.11	Determination of California Bearing Ratio (CBR)	ASTM D1883	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√
1.12	In Place California Bearing Ratio (CBR)	ASTM D4429	√	√	-	√	-	√	-	√	√	√	√	-	-	√	√	-	-
1.13	Sand Equivalent Value	ASTM D2419	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	√

Soil Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
BS and BS EN TESTS																			
1.14	Determination of Moisture Content (Oven Drying)	BS 1377 Part 2: Sec. 3.2	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	-
1.15	Determination of Liquid Limit (Cone Penetrometer)	BS 1377 Part 2: Sec. 4.3	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	-
1.16	Determination of Liquid Limit (Casagrande Method)	BS 1377 Part 2: Sec. 4.5	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	-
1.17	Determination of Plastic Limit and Plasticity Index	BS 1377 Part 2: Sec. 5	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	-
1.18	Particle Size Distribution (Wet Sieving Method)	BS 1377 Part 2: Sec. 9.2	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	-
1.19	Particle Size Distribution (Dry Sieving Method)	BS 1377 Part 2: Sec. 9.3	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	-
1.20	Dry Density/Moisture Content Relationship	BS 1377 Part 4 :Sec.3.5/3.6	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	-
1.21	Determination of California Bearing Ratio (CBR)	BS 1377 Part4: Sec. 7	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	-
1.22	In-Situ Density Test (Sand Replacement Method - Small Pouring Cylinder)	BS 1377 Part 9: Sec. 2.1	-	√	√	√	√	√	-	√	√	-	-	√	√	√	√	-	-

Soil Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
1.23	In-Situ Density Test (Sand Replacement Method – Large Pouring Cylinder)	BS 1377 Part 9: Sec. 2.2	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	-
1.24	In-Situ Density Test (Nuclear Gauge Method)	BS 1377 Part 9: Sec. 2.5	√	√	√	√	√	√	√	√	√	-	-	-	√	√	√	-	-
1.25	Determination of Organic Matter Content	BS 1377 Part 3: Sec. 3	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	-
1.26	Determination of Water Soluble Chloride Content	BS 1377 Part 3: Sec. 7.2	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	-
1.27	Determination of Acid Soluble Chloride Content	BS 1377 Part 3: Sec. 7.3/5.5	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	-
1.28	Determination of Water Soluble Sulphate Content	BS 1377 Part 3: Sec. 5.3/5.5	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	-
1.29	Determination of Acid Soluble Sulphate Content	BS 1377 Part 3: Sec. 5.2	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	-
1.30	Sand Equivalent Value	BS EN 933 Part 8	√	√	√	√	√	√	-	√	√	-	-	√	-	√	√	-	-
1.31	Method of Test for Cement Stabilized Materials	BS 1924 Part 2	√	√	-	√	-	-	-	√	√	√	-	-	-	√	√	-	-

Notes: - It is the responsibility of the Engineer and Consultant to ensure the materials testing laboratory proposed by the Contractor is totally independent and has no relationship inclusive of formal, financial, family or legal, or other with the Contractor or the Contractor Sub-contractors.

- (√*) means conditional approval

ملاحظات: - انها مسؤولية مهندس المشروع والاستشاري التأكد من عدم وجود صله بين المختبر المقترح والمقاول أو المقاول من الباطن بأي شكل كان سواء قانوني، مالي، عائلي أو خلافه.
- (√*) تعني اعتماد مشروط ولفتره محدودة.

2. Aggregate Tests

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
ASTM / AASHTO TESTS																			
2.1	Sampling of Aggregates	ASTM D75	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	-
2.2	Reducing Samples to Testing Size	ASTM C702	√	√	√	√	√	√	-	√	√	√	√	-	√	√	√	√	√
2.3	Particle Size Distribution	ASTM C136	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√
2.4	Material Finer than 0.075 mm	ASTM C117	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
2.5	Determination of Specific Gravity and Water Absorption of Fine Aggregate	ASTM C128	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√
2.6	Determination of Specific Gravity and Water Absorption of Coarse Aggregate	ASTM C127	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√
2.7	Clay Lumps and Friable Particles	ASTM C142	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√*
2.8	Lightweight Particles	ASTM C123	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	-
2.9	Organic Impurities for Fine Aggregates	ASTM C40	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√*
2.10	Flat and Elongated Particles	ASTM D4791	√	√	√	√	√	√	-	√	√	√	-	√	√	√	√	-	√
2.11	Los Angeles Abrasion	ASTM C131	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	√*

Aggregate Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
2.12	Los Angeles Abrasion	ASTM C535	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	√*
2.13	Magnesium Sulphate Soundness	ASTM C88	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√*
2.14	Percentage of Fractured Particles	ASTM D5821	√	√	√	√	√	√	-	√	√	√	√	√	-	√	√	-	√
2.15	Sieve Analysis of Mineral Filler	ASTM D546	√	√	-	√	√	√	-	√	√	√	-	-	-	-	√	-	√*
2.16	Uncompacted Void Content of Fine Aggregate	AASHTO T304	√	√	-	√	-	-	-	√	√	√	√	-	-	√	√	-	-

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Aggregate Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
BS and BS EN TESTS																			
2.17	Sampling of Aggregates (From Heaps)	BS 812 Part 102	√	√	√	√	√	√	√	√	√	-	-	√	√	√	√	-	-
2.18	Determination of Moisture Content (Oven Drying)	BS 812 Part 109: Sec.6	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	-
2.19	Determination of Particle Density and Water Absorption	BS EN 1097 Part 6	√	√	-	√	√	√	-	√	√	√	-	√	-	√	√	√	-
2.20	Particle Density and Water Absorption (All larger than 10mm aggregate)	BS 812 Part 2–5.3	√	√	-	√	√	√	-	√	√	√	-	-	-	-	√	-	-
2.21	Particle Density and Water Absorption (5-40mm aggregate)	BS 812 Part 2–5.4	√	√	-	√	√	√	√	√	√	√	-	-	√	-	√	-	-
2.22	Particle Density and Water Absorption (10mm aggregate and smaller)	BS 812 Part 2–5.5	√	√	-	√	√	√	√	√	√	√	-	-	-	-	√	-	-
2.23	Particle Size Distribution	BS EN 933 Part 1	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-
2.24	Particle Size Distribution (Wet)	BS 812 Part 103.1-7.2	√	√	√	√	√	√	√	√	√	√	-	√	√	√	√	-	-
2.25	Particle Size Distribution (Dry)	BS 812 Part 103.1-7.3	√	√	√	√	√	√	√	√	√	√	-	√	√	√	√	-	-
2.26	Material Finer than 0.075 mm	BS EN 933 Part 1	√	√	√	√	√	√	-	√	√	√	√	-	√	-	√	-	-
2.27	Material Finer than 0.063 mm	BS EN 933 Part 1	√	√	√	√	√	√	√	√	√	√	√	√	√	-	√	√	-
2.28	Determination of Shell Content	BS EN 933 Part 7	√	√	-	√	√	√	√	√	√	√	-	√	-	√	√	-	-

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Aggregate Tests (Cont.)

No.	Test	Standard	Laboratory															
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
2.29	Flakiness Index	BS EN 933 Part 3	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	-	-
2.30	Flakiness Index	BS 812 Part 105.1	√	√	√	√	√	√	√	√	√	√	-	√	√	√	√	-	-
2.31	Elongation (Shape) Index	BS EN 933 Part 4	√	√	√	√	√	-	√	√	√	√	-	√	√	-	√	-	-
2.32	Elongation Index	BS 812 Part 105.2	√	√	√	√	√	√	√	√	√	√	-	√	√	√	√	-	-
2.33	Determination of Aggregate Crushing Value	BS 812 Part 110	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	√*
2.34	Determination of Ten Percent Value	BS 812 Part 111	√	√	√	√	√	√	√	√	√	√	-	√	√	√	√	-	-
2.35	Determination of Aggregate Impact Value	BS 812 Part 112	√	√	√	√	√	√	√	√	√	√	-	-	-	√	√	-	-
2.36	Determination of Acid Soluble Chloride Content	BS EN 1744 Part 5	√	√	√	√	√	√	-	√	√	√	-	√	√	√	√	-	-
2.37	Determination of Water Soluble Chloride Content	BS 812 Part 117	√	√	√	√	√	√	-	√	√	-	√	√	√	√	√	-	-
2.38	Determination of Chloride Content (Acid Extract)	BS 812 Part 117-App. C	√	√	-	√	-	-	-	√	√	-	√	√	√	√	√	-	-
2.39	Determination of Sulphate Content	BS 812 Part 118	√	√	√	√	-	√	-	√	√	-	√	√	√	√	√	-	-
2.40	Determination of Acid Soluble Sulphate Content	BS EN 1744 Part 1: Sec 12	√	√	√	√	√	√	-	√	√	√	-	√	√	√	√	-	-

Notes: - It is the responsibility of the Engineer and Consultant to ensure the materials testing laboratory proposed by the Contractor is totally independent and has no relationship, inclusive of formal, financial, family or legal, or other with the Contractor or the Contractors Sub-contractors.

- **(√*) means conditional approval**

ملاحظات: - انها مسؤولية مهندس المشروع والاستشاري التأكد من عدم وجود صله بين المختبر المقترح والمقاول أو المقاول من الباطن بأي شكل كان سواء قانوني، مالي، عائلي أو خلافه.

- (√*) تعني اعتماد مشروط ولفتره محدود.

3. Concrete Tests

No.	Test	Standard	Laboratory															
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
ASTM TESTS																			
3.1	Making and Curing of Concrete Tests Specimen	ASTM C31	√	√	√	√	√	-	-	√	-	√	√	√	√	-	√	√	-
3.2	Sampling of Fresh Concrete	ASTM C172	√	√	√	√	√	√	-	√	√	-	√	√	√	-	√	√	-
3.3	Test for Temperature of Fresh Concrete	ASTM C1064	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	-
3.4	Slump Test	ASTM C143	√	√	√	√	√	√	-	√	√	-	√	√	√	-	√	√	-
3.5	Compressive Strength of Concrete Cylindrical Specimens	ASTM C39	√	√	√	√	√	√	-	√	√	√	√	-	√	√	√	√	-
3.6	Capping of Cylindrical Concrete Specimen	ASTM C617	√	√	√	√	√	√	-	√	-	√	-	√	-	√	-	√	-
3.7	Testing Concrete Cylinders Using Unbonded Caps	ASTM C1231	-	√	√	-	-	-	-	√	-	-	-	-	-	-	-	√	-
3.8	Obtaining and Testing of Drilled Cores and Sawed Beams	ASTM C42	√	√	√	√	√	√	-	√	√	√	√	√	-	-	√	-	-
3.9	Water Soluble Chloride in Concrete	ASTM C1218	-	√	-	√	-	-	-	√	√	-	-	√	-	-	-	-	-
3.10	Acid Soluble Chloride in Concrete	ASTM C1152	-	√	-	√	-	-	-	√	-	-	-	√	-	-	-	-	-
3.11	Resistance to Chloride Ion Penetration	ASTM C1202	√	√	√	√	√	√	-	√	√	√	√	-	√	√	√	-	-
3.12	Air Content Test for Fresh Concrete by Pressure Method	ASTM C231	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	-

Concrete Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
3.13	Air Content Test for Fresh Concrete by Volumetric Method	ASTM C173	-	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.14	Density Determination for Fresh Concrete	ASTM C138	√	√	√	√	√	-	-	√	√	√	√	√	√	√	√	√	-
3.15	Sampling of Shotcrete	ASTM C1385	-	√	√	√	-	-	-	√	-	-	-	-	-	-	-	-	-
3.16	Pullout Strength of Hardened Concrete	ASTM C900	-	√	-	-	√	-	-	√	-	-	√	-	-	-	√	-	-
3.17	Density Determination of Pervious Concrete	ASTM C1688	-	√	-	-	-	-	-	√	-	-	-	-	-	-	-	-	-
3.18	Infiltration Test for In place Pervious Concrete	ASTM C1701	-	√	-	-	-	-	-	√	-	-	-	-	-	-	-	-	-
3.19	Slump Flow Test for Self-Consolidated Concrete	ASTM C1611	-	√	√	√	√	-	-	-	√	-	-	-	-	-	√	√	-
3.20	Passing Ability for Self-Consolidating Concrete by J-Ring	ASTM C1621	-	√	√	-	-	-	-	-	√	-	-	-	-	-	-	-	-

Concrete Tests (Cont.)

No.	Test	Standard	Laboratory															
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
BS and BS EN TESTS																			
3.21	Sampling of Fresh Concrete	BS EN 12350 Part 1	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	-
3.22	Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	√
3.23	Slump Test	BS EN 12350 Part 2	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	-
3.24	Flow Table Test	BS EN 12350 Part 5	√	√	√	√	√	√	-	√	√	-	-	-	√	-	√	√	-
3.25	Shape and Dimensions of Specimen	BS EN 12390 Part 1	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√
3.26	Compressive Strength of Concrete Specimens	BS EN 12390 Part 3	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
3.27	Density of Hardened Concrete	BS EN 12390 Part 7	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	√
3.28	Obtaining and Testing of Drilled Cores	BS EN 12504 Part 1	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	-	-
3.29	Water Penetration Test	BS EN 12390 Part 8	√	√	√	√	√	-	-	√	√	√	√	-	√	√	√	-	-
3.30	Water Absorption Test	BS 1881 Part 122	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	-
3.31	Initial Surface Absorption (ISAT)	BS 1881 Part 208	√	√	√	√	√	√	-	√	√	√	-	√	√	√	√	-	-

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
3.32	Chloride Penetration Test	NT Build 492	√	√	√	√	√	√	-	√	√	√	-	-	√	√	√	-	-
3.33	Acid Soluble Chloride in Concrete	BS 1881 Part 124 Sec. 10.2	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	-
3.34	Acid Soluble Sulphate in Concrete	BS 1881 Part 124 Sec. 10.3	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	-
3.35	V-Funnel Test for Self-Compacting Concrete	BS EN 12350 Part 9	√	√	√	-	-	-	-	-	√	-	-	-	-	-	√	-	-
3.36	L-Box Test for Self-Compacting Concrete	BS EN 12350 Part 10	√	√	√	-	-	-	-	-	√	-	-	-	-	-	√	-	-

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4. Masonry Blocks and Paving Units Tests

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
4.1	Compressive Strength of Clay Masonry Blocks	BS EN 771 Part 1	√	√	√	-	√	√	-	-	-	√	√	-	-	-	√	-	-
4.2	Water Absorption for Clay Masonry Blocks	BS EN 771 Part 1	√	√	√	-	√	-	-	-	-	-	-	√	-	-	√	-	-
4.3	Compressive Strength of Concrete Masonry Blocks	BS 6073 Part 1	-	√	-	√	√	√	-	√	√	-	-	√	√	-	√	-	-
4.4	Compressive Strength of Concrete Masonry Blocks	BS EN 772 Part 1	√	√	√	-	√	√	√	√	√	-	-	√	-	-	√	-	-
4.5	Water Absorption for Masonry Blocks	EN 771 Part 3	√	√	√	√	√	√	-	√	-	√	√	-	-	√	√	-	-
4.6	Measurement of Dimensions of Kerbs	BS EN 1340 Annex C	√	√	√	-	√	√	-	√	√	-	-	√	-	√	√	-	-
4.7	Water Absorption for Kerbs	BS EN 1340 Annex E	√	√	√	√	√	√	-	√	√	-	-	√	-	√	√	-	-
4.8	Transverse Strength of Kerbs	BS EN 1340 Annex F	√	√	√	-	√	√	-	√	√	-	-	√	-	-	√	-	-
4.9	Water Absorption for Paving Blocks	BS EN 1338 Annex E	√	√	√	√	√	√	-	√	√	-	√	√	-	√	√	-	-
4.10	Tensile Strength of Paving Blocks	BS EN 1338 Annex F	-	√	√	-	√	-	-	√	√	-	√	-	-	-	√	-	-
4.11	Transverse Strength of Concrete Paving Flags/Slabs	BS EN 1339 Appendix F	√	√	√	-	√	-	-	√	√	-	√	√	-	-	√	-	-

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Masonry Blocks and Paving Units Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
4.12	Water Absorption for Concrete Paving Flags/Slabs	BS EN 1339 Appendix E	√	√	√	-	√	-	-	√	√	-	√	√	-	-	√	-	-
4.13	Measurement of Dimensions of Paving Blocks	BS 6717 Annex B	√	√	√	√	√	√	-	√	-	-	√	√	-	√	√	-	-
4.14	Tensile Strength of Paving Blocks	BS 6717 Annex E	-	√	√	√	√	√	√	√	√	-	√	√	-	√	√	-	-
4.15	Water Absorption for Interlocks	ASTM C140	√	√	√	-	√	√	-	√	√	-	-	√	√	-	√	-	-
4.16	Compressive Strength and water Absorption of Terrazzo Tiles (Internal Use)	BS EN 13748 Part 1-Sec.5.5/5.8	-	√	√	-	√	-	-	-	√	-	√	-	-	-	-	-	-

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5. Cementitious Materials Tests

No.	Test	Standard	Laboratory															
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
5.1	Taking and Preparing Samples of Cement	BS EN 196 Part 7	-	√	√	√	√	-	-	√	√	-	-	-	√	-	√	-	-
5.2	Method of Sampling of Cement	ASTM C183	-	√	√	√	√	-	-	√	-	-	-	-	√	-	√	-	-
5.3	Determination of Strength of Cement	BS EN 196 Part 1	√	√	√	√	√	-	-	√	√	-	-	√	-	-	√	-	-
5.4	Compressive Strength of Cement Mortars	ASTM C349	-	√	√	√	√	-	-	√	-	-	-	-	-	-	√	-	-
5.5	Calcium Oxide Content	BS EN 196 Part 2–Cl. 13.14	√	√	√	√	√	-	-	√	√	-	-	√	√	-	√	-	-
5.6	Magnesium Oxide Content	BS EN 196 Part 2–Cl. 13.15	√	√	√	√	√	-	-	√	√	-	-	√	√	-	√	-	-
5.7	Aluminum Oxide Content	BS EN 196 Part 2–Cl. 13.11	√	√	√	√	√	-	-	√	√	-	-	√	√	-	√	-	-
5.8	Ferric Oxide Content	BS EN 196 Part 2–Cl. 13.10	√	√	√	√	√	-	-	√	√	-	-	√	√	-	√	-	-
5.9	Loss on Ignition	BS EN 196 Part 2–Cl. 7	√	√	√	√	√	-	-	√	√	-	-	√	√	-	√	-	-
5.10	Impure Silica Content	BS EN 196 Part 2–Cl. 13.2&3	-	√	√	-	√	-	-	√	-	-	-	-	√	-	-	-	-
5.11	Pure Silica Content	BS EN 196 Part 2–Cl. 13.6	√	√	√	√	√	-	-	√	-	-	-	-	√	-	-	-	-

Cementitious Materials Tests (Cont.)

No.	Test	Standard	Laboratory															
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
5.12	Total Silica Content	BS EN 196 Part 2–Cl. 13.9	√	√	-	√	√	-	-	√	√	-	-	√	-	-	-	-	-
5.13	Alkalies Content	BS EN 196 Part 2–Cl. 17	-	√*	-	√	√	-	-	√	√	-	-	√	-	-	-	-	-
5.14	Determination of Setting Times of Cement	BS EN 196 Part 3	√	√	√	√	√	-	-	√	√	-	-	√	√	-	√	-	-
5.15	Determination of Soundness of Cement	BS EN 196 Part 3	√	√	√	√	√	-	-	√	√	-	-	√	√	-	√	-	-
5.16	Setting Time by Vicat Needle	ASTM C191	√	√	√	√	√	√	-	√	√	-	-	-	√	-	√	√	-
5.17	Normal Consistency of Cement	ASTM C187	√	√	√	√	-	√	-	√	√	-	-	-	√	-	√	-	-
5.18	Pozzolanicity Test of Pozzolanic Cement	BS EN 196 Part 5	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-	-
5.19	Chloride Content	BS EN 196 Part 21–Cl. 4	√	√	√	√	√	-	-	√	√	-	-	-	-	-	-	-	-
5.20	Carbon Dioxide Content	BS EN 196 Part 21	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-	-
5.21	Fineness Test of Cement	BS EN 196 Part 6	√	√	√	√	√	-	-	√	√	-	-	√	√	-	√	-	-
5.22	Compressive strength for Ground Granulated Blast Furnace Slag	ASTM C989	-	√	√	√	-	-	-	√	-	-	-	-	-	-	√	-	-

Cementitious Materials Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
5.23	Pozzolanic Activity Test	ASTM C1240	-	-	√	√	√	-	-	√	-	-	-	√	-	-	√	-	-
5.24	Characterization of Fly Ash for Potential Uses	ASTM D5759	-	√	-	-	-	-	-	√	-	-	-	-	-	-	-	-	-
5.25	Chemical Analysis of Fly Ash	ASTM C311	-	-	√	√	-	-	-	√	√	-	-	√	-	-	-	-	-
5.26	Length Change of Cement Mortars	ASTM C1012	-	√	√	-	-	-	-	√	-	-	-	-	-	-	√	-	-

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6. Road and Pavement Tests

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
ASTM / AASHTO TESTS – BINDERS																			
6.1	Sampling of Binders	ASTM D140	-	√	√	-	√	-	-	√	√	√	√	√	√	√	√	-	√*
6.2	Distillation of Cutback Asphalt	ASTM D402	-	√	-	-	√	√	-	-	√	√	√	-	-	-	√	-	-
6.3	Application Rate of Bituminous Distributors	ASTM D2995	√	√	√	√	√	√	-	√	√	√	√	√	-	√	√	-	-
6.4	Determination of Density of Bitumen	ASTM D70	√	√	-	-	√	√	-	√	√	√	-	√	√	√	√	-	√*
6.5	Penetration of Bituminous Materials	ASTM D5	√	√	√	-	√	√	-	√	√	√	√	√	√	√	√	-	√
6.6	Determination of Softening Point (Ring and Ball Method)	ASTM D36	√	√	√	-	√	√	-	√	√	√	√	√	√	√	√	-	√*
6.7	Flash Point, Cleveland Open Cup	ASTM D92	√	√	√	-	√	-	-	√	√	√	√	√	-	-	√	-	√*
6.8	Ductility of Bituminous Materials	ASTM D113	√	√	-	-	√	-	-	√	√	√	√	-	-	-	√	-	√*
6.9	Solubility in Trichloroethylene	ASTM D2042	√	√	-	-	√	-	-	-	√	√	-	-	-	-	√	-	√*
6.10	Loss on Heating	ASTM D6	-	√	-	-	√	-	-	√	√	√	-	-	-	-	√	-	√*
6.11	Determination of Viscosity of Asphalt	ASTM D2171	-	-	-	-	-	-	-	√	√	-	-	√	-	-	-	-	-
6.12	Viscosity Determination using Rotational Viscometer (RV)	ASTM D4402 AASHTO T316	√	√	√	-	√	-	-	-	√	√	√	-	-	-	√	-	√*
6.13	Flexural Creep Stiffness using the Bending Beam Rheometer (BBR)	ASTM D6648 AASHTO T313	√	√	√	-	√	-	-	-	√	√	√	-	-	-	-	-	√*

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Road and Pavement Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
6.14	Determining the Rheological Properties using Dynamic Shear Rheometer (DSR)	ASTM D7175 AASHTO T315	√	√	√	-	√	-	-	-	√	√	√	-	-	-	-	-	√*
6.15	Accelerated Aging of Asphalt Binder Using a Pressurized Aging Vessel (PAV)	ASTM D6521 AASHTO R28	√	√	√	-	√	-	-	-	√	√	√	-	-	-	-	-	√*
6.16	Effect of Heat and Air on a Moving Film of Asphalt (Rolling Thin-Film Oven Test)	ASTM D2872 AASHTO T240	√	√	√	-	√	-	-	-	√	√	√	-	-	-	-	-	√*
6.17	Multiple Creep and Recovery (MSCR) using Dynamic Shear Rheometer (DSR)	ASTM D7405 AASHTO TP70	√	√	√	-	√	-	-	-	√	√	√	-	-	-	-	-	-
6.18	Water in Petroleum Products and Bituminous Materials by Distillation	ASTM D95	√	√	-	-	√	√	-	-	√	√	-	-	-	-	-	-	-
6.19	Separation Tendency of Polymers	ASTM D7173	√	√	-	-	-	-	-	-	√	√	√	-	-	-	-	-	-
6.20	Solubility of Binders in Toluene	ASTM D5546 AASHTO T44	-	√	-	-	-	-	-	-	√	√	-	-	-	-	-	-	-
6.21	Direct Tension Test	ASTM D6723 AASHTO T314	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Road and Pavement Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
ASTM / AASHTO TESTS – ASPHALT MIXTURES																			
6.22	Sampling of Bituminous Mixtures	ASTM D979	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	√*
6.23	Sampling Compacted Bituminous Mixtures for Laboratory Testing	ASTM D5361	√	√	√	√	√	√	-	√	√	√*	√	√	√	√	√	-	√*
6.24	Preparation of Specimens Using Marshall Apparatus	ASTM D6926	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√
6.25	Bulk Specific Gravity and Density	ASTM D2726	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	√
6.26	Bulk Specific Gravity and Density Using Coated Samples	ASTM D1188	√	√	-	√	√	√	-	√	√	√	-	-	√	-	√	-	-
6.27	Maximum Specific Gravity and Density	ASTM D2041	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√
6.28	Maximum Specific Gravity and Density Using Vacuum Sealing	ASTM D6857	-	√	-	-	-	-	-	-	√	√	-	-	-	-	-	-	-
6.29	Thickness of Asphalt Specimen	ASTM D3549	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	√
6.30	Marshall Stability and Flow of Bituminous Mixtures	ASTM D6927	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√	√
6.31	Resistance to Plastic Flow Using Marshall Apparatus (6 in. Specimen)	ASTM D5581	-	√	-	-	√	-	-	√	√	-	√	-	-	√	√	-	√*
6.32	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures	ASTM D2172	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√*
6.33	Asphalt Content of Hot-Mix Asphalt by Ignition Method	ASTM D6307	√	√	-	-	-	-	-	-	-	√	√	-	-	√	√	-	√*
6.34	Mechanical Size Analysis of Extracted Aggregate	ASTM D5444	√	√	√	√	√	√	-	√	√	√	√	√	√	√	√	-	√*

Road and Pavement Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
6.35	Density of Bituminous Concrete in Place by Nuclear Methods	ASTM D2950	-	√	-	√	-	-	-	√	√	-	-	-	-	√	√	-	-
6.36	Sample Preparation and Density of Specimens Using Gyratory Compactor	AASHTO T 312	-	√	-	-	√	-	-	-	√	√	-	-	-	√	√	-	√*
6.37	Preparation of Performance Test Specimens Using Gyratory Compactor	AASHTO PP60	-	√	-	-	-	-	-	-	-	√	-	-	-	-	-	-	√*
6.38	Developing Dynamic Modulus Master Curves Using AMPT	AASHTO PP61	-	√*	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-
6.39	Dynamic Modulus and Flow Number for Hot Mix Asphalt (HMA)	AASHTO TP79	-	√*	-	-	-	-	-	-	-	√	√	-	-	-	-	-	-
6.40	Indirect Tensile (IDT) Strength of Bituminous Mixtures	ASTM D6931	√	√	-	-	√	-	-	-	√	-	√	-	-	√	√	-	√*
6.41	Fatigue Life of Asphalt Subjected to Repeated Flexural Bending	AASHTO T321	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	√*
6.42	Surface Frictional Properties Using the British Pendulum Tester	ASTM E303	-	√	-	-	-	-	-	-	√	-	-	-	-	√	√	-	-
6.43	Skid Resistance of Paved Surfaces Using a Full-Scale Tire	ASTM E274	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.44	Accelerated Polishing of Aggregates Using the British Wheel	ASTM D3319	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.45	Computing IRI of Roads from Longitudinal Profile Measurements	ASTM E1926	-	√	√	-	-	-	-	√	√	√	-	-	-	√	-	-	-
6.46	Resistance of Compacted Asphalt to Moisture-Induced Damage	AASHTO T283	-	√	-	-	√	-	-	√	√	√	-	-	-	√	-	-	-

Road and Pavement Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
6.47	Sampling of Asphalt	BS EN 12697 Part 27	√	√	√	√	√	√	√	√	√	-	-	√	√	√	√	-	-
6.48	Preparation of Samples for Testing	BS EN 12697 Part 28	√	√	√	√	√	√	-	√	√	√	-	√	√	√	√	-	-
6.49	Specimen Preparation by Impact Compactor	BS EN 12697 Part 30	√	√	√	√	√	√	√	√	√	-	-	√	√	√	√	-	-
6.50	Soluble Binder Content	BS EN 12697 Part 1	-	√	-	√	√	√	-	√	√	√	√	√	√	√	√	-	-
6.51	Particle Size Distribution	BS EN 12697 Part 2	√	√	√	√	√	√	√	√	√	-	√	√	√	√	√	-	-
6.52	Determination of Maximum Density	BS EN 12697 Part 5	√	√	√	√	√	-	-	√	√	-	-	-	√	√	√	-	-
6.53	Determination of Bulk Density	BS EN 12697 Part 6	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	-
6.54	Determination of Void Characteristics	BS EN 12697 Part 8	√	√	√	√	√	-	√	√	√	√	-	-	√	√	√	-	-
6.55	Determination of Reference Density	BS EN 12697 Part 9	-	√	-	√	-	-	-	√	√	-	-	-	-	-	-	-	-
6.56	Temperature Measurement	BS EN 12697 Part 13	√	√	√	√	√	√	-	√	√	√	-	√	√	√	√	-	√
6.57	Determination of Dimensions of Specimen	BS EN 12697 Part 29	√	√	√	√	√	√	√	√	√	√	-	√	√	√	√	-	-
6.58	Marshal Test	BS EN 12697 Part 34	√	√	√	√	√	√	√	√	√	-	-	√	√	√	√	-	-
6.59	Laboratory Mixing	BS EN 12697 Part 35	-	√	-	√	√	-	-	-	√	-	-	-	-	√	-	-	-

Road and Pavement Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
6.60	Determination of Thickness of Specimen	BS EN 12697 Part 36	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-	-
6.61	Binder Content by Ignition	BS EN 12697 Part 39	√	√	√	√	-	-	-	-	-	-	√	-	-	√	-	-	-
6.62	Determination of Needle Penetration	BS EN 1426	-	√	-	-	√	√	√	√	-	-	√	√	√	√	√	-	-
6.63	Determination of Softening Point (Ring and Ball Method)	BS EN 1427	-	√	-	-	√	-	-	√	√	-	-	√	√	√	√	-	-
6.64	Determination of the indirect tensile strength of bituminous specimens	BS EN 12697 Part 23	-	√	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-
Pavement Markings Tests																			
6.65	Binder Content of Thermoplastic Material	BS 3262 Part 1–Ap. C	-	√	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-
6.66	Softening Point (Ring and Ball Method) of Thermoplastic Material	BS 2000-58	-	√	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-
6.67	Glass Bead Content of Thermoplastic Material	BS 3262 Part 1–Ap. D	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.68	Glass Bead Content of Thermoplastic Material	AASHTO T250	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.69	Determination of Density of Thermoplastic Material	BS 3262 Part 3–Ap. C	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.70	Flash Point (Open) of Thermoplastic Material	BS 2000-35	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.71	Flow Resistance of Thermoplastic Material	BS 3262 Part 1–Ap. H	-	√	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-
6.72	Combined Gradation of Material	BS 3262 Part 1–Ap. D	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Road and Pavement Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
6.73	Particle Size Distribution of Glass Beads	BS 6088 Appendix B	-	√	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-
6.74	Measurement of Retro-reflectivity of pavement marking materials	BS EN 1436 Annex A&B	-	√	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-
6.75	Measurement of Retro-reflectivity of pavement marking materials	ASTM E1710	-	√	-	-	-	-	-	-	-	-	-	-	√	-	-	-	-
6.76	Measurement of Skid Resistance	BS 3262 Part 1–Ap. J	-	√	-	-	√	-	-	-	√	-	-	-	-	-	-	-	-
6.77	Determination of Heat Stability	BS 3262 Part 1–Ap. G	-	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-
6.78	Determination of Luminance Factor	BS 3262 Part 1–Ap. F	-	√	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-
6.79	Dry Film Thickness	BS 3262 Part 3–Ap. B	-	√	-	-	-	-	-	-	√	-	-	-	√	-	-	-	-
6.80	Wet Film Thickness by Notch Gauge	BS EN 13197 Annex C	-	√	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-
6.81	Wet Film Thickness by Notch Gauge	ASTM D4414	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes: - **It is the responsibility of the Engineer and Consultant to ensure the materials testing laboratory proposed by the Contractor is totally independent and has no relationship, inclusive of formal, financial, family or legal, or other with the Contractor or the Contractors Sub-contractors.**

- **(√*) means conditional approval**

ملاحظات: - انها مسؤولية مهندس المشروع والاستشاري التأكد من عدم وجود صله بين المختبر المقترح والمقاول أو المقاول من الباطن بأي شكل كان سواء قانوني، مالي، عائلي أو خلافه.

- (√*) تعني اعتماد مشروط

Approved Labs for Asphalt Mix Preparation and Verification

No.	Item	Laboratory			
		ACES	Fugro	Tech Lab	QGEC
Marshall Mixtures					
1	**Asphalt Mix Design**	√	√	-	-
2	**Asphalt Mix Verification***	√	√	√	√

*Mix design verification shall be carried out by a lab different from the one that prepared the mix.

Note: It is the responsibility of the Engineer and Consultant to ensure the materials testing laboratory proposed by the Contractor is totally independent and has no relationship, inclusive of formal, financial, family or legal, or other with the Contractor or the Contractors Sub-contractors.

ملاحظه: انها مسؤولية مهندس المشروع والاستشاري التأكد من عدم وجود أي تضارب بين المختبر المقترح والمقاول من الباطن أو المقاول الرئيسي من الناحية الرسمية أو المالية أو العائلية أو القانونية أو غيرها.

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7. Steel Tests

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
7.1	Tensile Strength Test	BS EN 10002 Part 1	√*	√	√	√	√	-	-	√	√	-	√	-	-	√	√	-	-
7.2	Tensile Strength Test	ASTM A370	√	√	√	-	√	-	-	√	-	√	√	-	-	√	√	-	-
7.3	Bend Test	BS 4449 Sec. 7.2.5	√	√	√	√	√	-	-	√	√	-	√	-	-	√	√	-	-
7.4	Rebend Test	BS 4449 Sec. 7.2.5	√	√	√	√	√	-	-	√	√	√	√	-	-	√	√	-	-
7.5	Izod Impact Test of Metals	BS 131 Part 1	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-	-
7.6	Notched Bar Impact Test of Metals	ASTM E23	√	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-	-
7.7	Charpy Impact Method	BS EN 10045	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-	-
7.8	Tensile Test Of High Tensile Steel Wire &Strand	BS EN ISO 15630-3	√	√	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.9	Testing Multi-Wire Steel Prestressing Strand	ASTM A1061	√	√	√	-	√	-	-	-	-	-	-	-	-	-	-	-	-
7.10	Tension Testing of Wire Ropes and Strand	ASTM A 931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.11	Load Resistance Test Of Manhole Covers	BS EN 124	√	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-

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8. Geotechnical Tests

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
Laboratory Tests																			
8.1	Description of Soil and Rock	BS 5930 Section 6	-	√	√	√	√	-	-	√	√	-	√	-	-	√	√	-	-
8.2	Undrained Triaxial Test without Pore Water Pressure Measurement	BS 1377 Part 7-Sec. 8	-	-	-	√	-	-	-	√	√	-	-	-	-	-	-	-	-
8.3	Point Load Index Determination	ASTM D5731	-	√	√	√	√	-	-	√	√	√	√	-	-	-	√	-	-
8.4	Preparing Rock Core Specimens to Dimensional and Shape Tolerances	ASTM D4543	√	√	√	√	√	-	-	√	-	√	-	-	-	-	√	-	-
8.5	Compressive Strength of Rock Core Specimen	ASTM D7012	√	√	√	√	√	-	-	√	√	√	√	-	-	√	√	-	-
8.6	Determination of One Dimensional Consolidation Properties of Soils	BS 1377 Part 5-Sec. 3	-	√	-	√	-	-	-	√	-	-	√	-	-	-	-	-	-
8.7	Determination of One Dimensional Consolidation Properties of Soils	ASTM D2435	-	√	-	-	-	-	-	√	-	-	-	-	-	-	-	-	-
8.8	Direct Shear on Soil (Small Box)	BS 1377 Part 7-Sec. 4	-	√	√	√	√	-	-	√	√	√	√	-	-	-	√	-	-
8.9	Direct Shear on Soil (Large Box)	BS 1377 Part 7-Sec. 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.10	Direct Shear on Rock	ASTM D5607	-	√	-	-	-	-	-	√	-	-	√	-	-	-	-	-	-

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Geotechnical Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
8.11	One Dimensional Swell of Cohesive Soils	ASTM D4546	-	√	-	-	-	-	-	√	-	-	-	-	-	-	-	-	-
8.12	Constant Head Permeability Test	BS 1377 Part 5-Sec. 5	-	√	√	-	-	-	-	√	√	-	-	-	-	-	√	-	-
8.13	Vane Shear Test	BS 1377 Part 7-Sec. 3	-	√	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-
Field Tests																			
8.14	Soil Sampling	BS 5930 Cl. 22	-	√	√	√	√	-	-	√	√	√	√	-	-	-	√	-	-
8.15	Ground Water Sampling	BS 5930 Cl. 23	-	√	√	√	√	-	-	√	√	√	√	-	-	-	√	-	-
8.16	Ground Water Level Measurement	BS 5930 Cl. 23, 27, 47	-	√	√	√	√	-	-	√	√	√	√	-	-	-	√	-	-
8.17	Falling Head Permeability Test	BS 5930 Cl. 25	-	√	√	√	√	-	-	√	√	√	√	-	-	-	√	-	-
8.18	Packer Test	BS 5930 Cl. 25	-	√	√	√	√	-	-	√	√	√	√	-	-	-	√	-	-
8.19	Standard Penetration Test (SPT)	BS 1377 Part 9-Sec. 3.3	-	√	√	√	√	-	-	√	√	√	√	-	-	-	√	-	-

Geotechnical Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
8.20	Electrical Resistivity Test	ASTM G57	-	√	√	√	√	-	-	√	√	√	√	-	-	-	√	-	-
8.21	Plate Load Test	BS 1377 Part 9-Sec. 4.1	√	√	√	√	√	√	-	√	√	√	√	-	√	√	√	-	-
8.22	California Bearing Ratio (CBR) Test	BS 1377 Part 9-Sec. 4.3	√	√	√	√	√	-	-	√	√	√	√	-	√	√	√	-	-
8.23	Dynamic Cone Penetrometer for Shallow Pavements	ASTM D6951	√	√	√	-	-	-	-	√	-	√	-	-	√	-	-	-	√*

Notes:

- **Other tests related to geotechnical field can be found in soil and aggregate tests sections.**
- **This list is for geotechnical related tests. General requirements for geotechnical soil investigation firms should follow the Ministry of Environment conformity criteria.**
- **It is the responsibility of the Engineer and Consultant to ensure the Materials Testing Laboratory proposed by the Contractor is totally independent and has no relationship, inclusive of formal, financial, family or legal, or other with the Contractor or the Contractors Sub-contractors.**
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9. Environmental Tests

No.	Test	Standard	Laboratory															
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	BATLABS	JEL	ITL	QIL	CTL	Ashghal
9.1	pH	APHA/AWWA 4500-H+B 22nd Edition 2012	√	√	√	√	√	-	-	-	√	√	√	√	-	-	√	-	√
9.2	Electrical Conductivity	APHA/AWWA 2510-B 22nd Edition 2012	√	√	√	√	√	-	-	-	√	√	√	√	-	-	√	-	√
9.3	Turbidity	APHA/AWWA 2130 B 22nd Edition 2012	√	√	√	√	√	-	-	√	-	√	√	√	-	-	√	-	√
9.4	Total Solids	APHA/AWWA 2540-B 22nd Edition 2012	√	√	√	√	√	-	-	-	√	√	-	-	-	-	√	-	√*
9.5	Total Suspended Solids (TSS)	APHA/AWWA 2540-D 22nd Edition 2012	√	√	√	√	√	-	-	√	-	√	√	-	-	-	√	-	√
9.6	Total Volatile Suspended Solids (TVSS)	APHA/AWWA 2540-D 22nd Edition 2012	-	√	√	-	-	-	-	-	√	-	-	-	-	-	√	-	√*
9.7	Total Dissolved Solids (TDS)	APHA/AWWA 2540-C 22nd Edition 2012	√	√	√	√	√	-	-	-	√	√	√	√	-	-	√	-	√
9.8	Total Volatile Dissolved Solids (TVDS)	APHA/AWWA 2540-C 22nd Edition 2012	-	√	√	-	-	-	-	-	√	-	-	-	-	-	√	-	√*
9.9	Settleable Solids	APHA/AWWA 2540-F 22nd Edition 2012	-	√	√	√	-	-	-	-	-	-	-	-	-	-	√	-	√*
9.10	Sludge Weight	APHA, SM,2710 D, 22nd Edition 2012	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-	√*
9.11	Sludge Volume	APHA, SM,2710 D, 22nd Edition 2012	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-	√*

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Environmental Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	BATLABS	JEL	ITL	QIL	CTL	Ashghal
9.12	Sludge Volume Index	APHA, SM,2710 D, 22nd Edition 2012	-	√	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√*
9.13	Biochemical Oxygen Demand (BOD)	APHA/AWWA 22nd Edition 2012.Test-5210B & 4500-OC	√	√	√	√	√	-	-	-	√	√	-	-	-	-	√	-	√
9.14	Dissolved Oxygen	APHA/AWWA 22nd Edition 2012.Test-4500-O G	√	√	√	√	√	-	-	-	√	√	-	-	-	-	√	-	√
9.15	Chemical Oxygen Demand (COD)	APHA/AWWA 22nd Edition 2012 Test-5220 D	√	√	√	√	√	-	-	-	-	√	-	√	-	-	√	-	√
9.16	Chemical Oxygen Demand (COD)	APHA/AWWA 22nd Edition 2012 Test-5220 B	-	-	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-
9.17	Total Kjeldahl Nitrogen	APHA/AWWA 4500 N 22nd Edition 2012	√	√	-	√	-	-	-	-	-	√	-	-	-	-	-	-	√
9.18	Total Organic Nitrogen	APHA/AWWA 4500 N org- 22nd Edition 2012	√	√	-	√	-	-	-	-	-	√	-	-	-	-	-	-	√
9.19	Ammonia Nitrogen	APHA/AWWA 22nd Edition 2012 Test-4500 NH3 B&C	√	√	-	√	-	-	-	-	-	√	-	-	-	-	-	-	√
9.20	Nitrate Nitrogen	APHA/AWWA 22nd Edition 2012 Test-4500-NO3D	-	√	√	√	-	-	-	-	-	-	-	√	-	-	-	-	-
9.21	Nitrite Nitrogen	APHA/AWWA 22nd Edition 2012 Test-4500-NO2B	√	√	-	√	√	-	-	-	-	-	-	-	-	-	-	-	-
9.22	Oil & grease	APHA/AWWA 5520 D 22nd Edition 2012	√	√	√	-	-	-	-	-	-	√	-	-	-	-	-	-	√*

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Environmental Tests (Cont.)

No.	Test	Standard	Laboratory															
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	BATLABS	JEL	ITL	QIL	CTL	Ashghal
9.23	Total Chlorine	APHA/AWWA 4500-Cl G, 22nd Edition 2012	√	√	√	√	√	-	-	√	-	-	-	-	-	-	-	-	
9.24	Residual Chlorine	APHA/AWWA 4500-Cl I, 22nd Edition 2012	√	√	-	-	-	-	-	√	-	√*	-	√	-	-	-	-	√
9.25	Chloride	APHA/AWWA 4500-Cl B, 22nd Edition 2012	√	√	√	√	√	-	-	-	√	√	√	√	-	-	√	-	√*
9.26	Chloride	APHA 4110-B, 22nd Edition 2012	-	√	-	-	-	-	-	-	-	√	-	-	-	-	-	-	√*
9.27	Sulphate	APHA 4110-B, 22nd Edition 2012	-	√	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-
9.28	Nitrate	APHA 4110-B, 22nd Edition 2012	-	√	-	-	-	-	-	-	-	√	-	-	-	-	-	-	√
9.29	Nitrite	APHA 4110-B, 22nd Edition 2012	-	√	-	-	-	-	-	-	-	√	-	-	-	-	-	-	√
9.30	Fluride	APHA 4110-B, 22nd Edition 2012	-	-	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-
9.31	Iodide	APHA 4110-B, 22nd Edition 2012	-	-	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-
9.32	Phosphate	APHA 4110-B, 22nd Edition 2012	-	-	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-
9.33	Phosphorous (total)	APHA/AWWA 4500-P D&C 22nd Edition 2012	√	√	-	√	√	-	-	-	-	-	-	√	-	-	√	-	√
9.34	Phenol Concentrations	APHA/AWWA 5530 22nd Edition 2012	-	√	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-

Environmental Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	BATLABS	JEL	ITL	QIL	CTL	Ashghal
9.35	Cyanide	APHA/AWWA 4500-CN C&E 22nd Edition 2012	-	-	-	√	-	-	-	-	-	√	-	-	-	-	-	-	-
9.36	Sulphate	APHA/AWWA 4500-SO4, 22nd Edition 2012	√	√	√	√	√	-	-	√	-	√	-	√	-	-	√	-	√*
9.37	Sulphide	APHA/AWWA 4500--S2 E or F, 22nd Edition 2012	√	√	√	-	√	-	-	√	-	√	-	-	-	-	-	-	√*
9.38	Fluoride	APHA/AWWA 4500F, 22nd Edition 2012	√	-	-	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.39	Total Hardness	APHA/AWWA 2340-C, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	√	-	-	√	-	√
9.40	Calcium	APHA/AWWA 3500-Ca B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	-	-	√	-	-	√	-	√
9.41	Magnesium Concentration by calculation	APHA/AWWA 3500-Mg B- 22nd Edition 2012	-	√	√	√	√	-	-	-	-	-	-	√	-	-	√	-	√
9.42	Magnesium	APHA 3120-B 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	√	-	√
9.43	Calcium	APHA 3120-B, 22ndEdition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√*
9.44	Sodium	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	BATLABS	JEL	ITL	QIL	CTL	Ashghal
9.45	Potassium	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√
9.46	Iron	APHA 3120-B 22nd Edition 2012	√	√	√	√	√	-	-	√	-	√	-	-	-	-	-	-	√
9.47	Aluminum	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√
9.48	Arsenic	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√
9.49	Cadmium	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√
9.50	Chromium	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√
9.51	Cobalt	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√
9.52	Copper	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√*
9.53	Nickel	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√
9.54	phosphorous	APHA 3120-B, 22nd Edition 2012	√	-	-	-	√	-	-	-	-	√	-	-	-	-	-	-	-
9.55	Zinc	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√
9.56	Silicon	APHA 3120-B, 22nd Edition 2012	√	-	-	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.57	Silver	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.58	Antimony	APHA 3120-B, 22nd Edition 2012	√	-	-	√	√	-	-	-	-	√	-	-	-	-	-	-	-

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	BATLABS	JEL	ITL	QIL	CTL	Ashghal
9.59	Barium	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.60	Beryllium	APHA 3120-B, 22nd Edition 2012	√	-	-	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.61	Boron	APHA 3120-B, 22nd Edition 2012	√	√	-	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.62	Manganese	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√*
9.63	Molybdenum	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.64	Selenium	APHA 3120-B, 22nd Edition 2012	√	-	√	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.65	Thallium	APHA 3120-B, 22nd Edition 2012	√	√	-	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.66	Titanium	APHA 3120-B, 22nd Edition 2012	√	-	√	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.67	Vanadium	APHA 3120-B, 22nd Edition 2012	√	-	√	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.68	Lead	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√
9.69	Lithium	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.70	Mercury	APHA 3120-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√*
9.71	Tin	APHA 3120-B, 22nd Edition 2012	-	-	-	√	√	-	-	-	-	-	-	-	-	-	-	-	√
9.72	Chromium(VI)	APHA 3500-Cr B, 22nd Edition 2012	-	-	-	-	√	-	-	-	-	√	-	-	-	-	-	-	-
9.73	Bromide	APHA 4110-B, 22nd Edition 2012	-	√	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-

Environmental Tests (Cont.)

No.	Test	Standard	Local Labs															
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	BATLABS	JEL	ITL	QIL	CTL	Ashghal
9.74	Bromate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.75	Total Alkalinity	APHA/AWWA 2320B, 22nd Edition 2012	√	√	√	√	√	-	-	√	-	√	-	√	-	-	√	-	√
9.76	Phenolphthalein Alkalinity	APHA/AWWA 2320-B, 22nd Edition 2012	√	√	√	√	√	-	-	√	√	-	-	-	-	-	√	-	√*
9.77	Bicarbonate	APHA 2320-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.78	Carbonate	APHA 2320-B, 22nd Edition 2012	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	-
9.79	Total Organic Carbon (TOC)	APHA/AWWA 5310-B or C, 22nd Edition 2012	√*	√	√*	-	√	-	-	-	-	√	-	-	-	-	-	-	√*
9.80	Residual Pesticides	EPA 608	√	-	-	√	-	-	-	-	-	√	-	-	-	-	-	-	√*
9.81	Organic Hydrocarbon	APHA/AWWA/ 6200 volatile Organic Compounds	√	√	√	√	√	-	-	-	-	√	-	-	-	-	-	-	√*
9.82	Total Silicates	APHA/AWWA/ 4500-SiO2-C, 22nd Edition 2012	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-	√*

Environmental Tests (Cont.)

No.	Test	Standard	Local Labs															
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	BATLABS	JEL	ITL	QIL	CTL	Ashghal
9.83	Silicon, Aluminum	APHA/AWWA/ 3111 D , Direct Nitrous Oxide – Acetylene flame method (AAS)	√	-	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√*
9.84	Total Coliforms	APHA/AWWA 9222B & 9222D, 22nd Edition 2012	√	√*	-	√	-	-	-	√	-	√	-	-	-	-	-	-	√*
9.85	Fecal Coliform	APHA/AWWA-9222D, 22nd Edition 2012	√	√*	-	√	-	-	-	-	-	√	-	-	-	-	-	-	√*
9.86	E-Coli	APHA/AWWA-9223B 22nd Edition2012 IDEXX method	√	√	√	√	√	-	-	√	-	√	-	-	-	-	-	-	√*
9.87	Total Coliforms	APHA/AWWA-9223B 22nd Edition2012 IDEXX method	-	√	-	√	√	-	-	-	-	√	-	-	-	-	-	-	√
9.88	Fecal Coliform	APHA/AWWA-9223B 22nd Edition2012 IDEXX method	-	√	-	√	√	-	-	-	-	√	-	-	-	-	-	-	√
9.89	Nematodes (Helminths) Eggs	WHO, Lab manual of Parasitological and Bacteriological Techniques, 1996	-	√	-	√	-	-	-	-	-	√	-	-	-	-	-	-	√
9.90	Microscopic Examination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	√*
9.91	Pseudomonas Aeruginosa	APHA 9213-E 22nd Edition 2012	-	-	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-

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No.	Test	Standard	Local Labs																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	BATLABS	JEL	ITL	QIL	CTL	Ashghal
9.92	Fecal Streptococcus/ Enterococcus	APHA 9230-C 22nd Edition 2012	-	-	-	√	-	-	-	-	-	√	-	-	-	-	-	-	-
9.93	Legionella	APHA 9260-J 22nd Edition 2012	-	-	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-
9.94	Enteric Viruses	RT – PCR Methodology	-	-	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-
9.95	Cryptosporidium	RT – PCR Methodology	-	-	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-

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- (√*) means conditional approval

ملاحظات: - انها مسؤولية مهندس المشروع والاستشاري التأكد من عدم وجود صله بين المختبر المقترح والمقاول أو المقاول من الباطن بأي شكل كان سواء قانوني، مالي، عائلي أو خلافه.

- (√*) تعني اعتماد مشروط ولفتره محدودة.

10. Non Destructive Tests

No.	Test	Standard	Laboratory															
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	BATLABS	JEL	ITL	QIL	CTL	Ashghal
10.1	Falling Weight Deflectometer	ASTM D4694	-	√	√	-	-	-	-	-	-	√	-	-	-	√	-	-	-
10.2	Road Profilometer (IRI)	ASTM E950	-	√	√	-	-	-	-	√	√	√	-	-	-	√	-	-	√*
10.3	Pavement Quality Indicator	ASTM D7113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	√*
10.4	Rebound Hammer Test for Concrete	ASTM C805	√	√	√	-	-	-	-	√	-	√	√	√	√	-	√	-	√
10.5	Concrete Cover Determination	BS 1881 Part 204	√	√	√	√	√	-	-	-	√	√	√	-	-	-	√	-	-
10.6	Ultrasonic Pulse Velocity	BS EN 12504 Part 4	√	√	√	-	√	-	-	√	√	√	√	-	√	-	√	-	-
10.7	Crack Width Gauge	Gauge Manual	√	√	√	-	√	-	-	-	-	-	-	-	-	-	-	-	-
10.8	Crack Measurement Microscope	Microscope Manual	√	√	√	-	√	-	-	-	-	-	√	-	-	-	√	-	-
10.9	Pile Integrity (Pulse Echo Test)	ASTM D5882	-	√	√	-	-	-	-	√	-	-	-	-	-	-	√	-	-
10.10	Pile Integrity (Cross Hole Test)	ASTM D6760	-	√	√	-	-	-	-	√	-	-	-	-	-	-	√	-	-

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Non Destructive Tests (Cont.)

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	BATLABS	JEL	ITL	QIL	CTL	Ashghal
10.11	Pile Dynamic Test	ASTM D4945	-	√	√	-	-	-	-	√	-	-	-	-	-	-	√	-	-
10.12	Caliper Logging of Borehole	ASTM D6167	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
10.13	Coating Pull-Off Test	ASTM D4541	√	√	√	-	-	-	-	√	√	-	-	-	-	-	√	-	-
10.14	Coating Thickness Measurement	ASTM D7091 / D6132	-	√	-	-	-	-	-	-	√	-	-	-	-	-	√	-	-
10.15	Holiday Detection of Coating	ASTM D4787 / D5162	-	√	-	-	-	-	-	√	-	-	-	-	-	-	-	-	-
10.16	Magnetic Particle Inspection	ASTM E709 / ASME - Sec. V	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
10.17	Dye Penetration Test	ASTM E165 / ASME - Sec. V	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-

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(√*) means conditional approval

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- (√*) تعني اعتماد مشروط ولفتره محدودة.

11. Geotextiles & Waterproofing Tests

No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
GEOTEXTILES TESTING																			
11.1	Breaking Strength and Elongation of Textile Fabrics (Grab Test).	ASTM D5034	-	√*	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.2	Textiles Puncture Resistance.	ASTM D751	-	√*	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.3	Textiles Bursting Strength.	ASTM D3787	-	√*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.4	Trapezoid Tearing Strength of Geotextiles.	ASTM D4533	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.5	Static Puncture Test (CBR Test)	BS EN ISO 12236	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.6	Tensile Strength &Elongation At Rupture.	BS EN ISO 10319	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.7	Breaking Strength and Elongation of Textile (strip Test).	ASTM D5035	-	√*	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.8	Dynamic Perforation Test (Cone Drop Test)	BS EN ISO 13433	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.9	Water Permeability	BS EN ISO 11058	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.10	Pore Size	BS EN ISO 12956	-	√*	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.11	Determination Of Mass Per Unit Area (Weight)	BS EN 12127	-	√*	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.12	Measuring The Nominal Thickness Of Geosynthetics	ASTM D5199	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.13	Determination Of Thickness Of Textiles	BS EN ISO 5084	-	√*	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-

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No.	Test	Standard	Laboratory																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
WATERPROOF MEMBRAINS & PLASTIC LINER TESTING																			
11.14	Determination of Tensile Properties for plastic	ASTM D 638	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.15	Determination of Tensile Properties for plastic	BS EN ISO 527 Part 3	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.16	Tensile strength of Vulcanized Rubber and Thermoplastic Elastomers	ASTM D 412	-	√*	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.17	Initial Tear Resistance of Plastic Film and Sheeting	ASTM D 1004	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.18	Pressure-Sensitive Adhesion to Primed Concrete	ASTM D 1000	-	√*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.19	Puncture Resistance of Ground Covers	ASTM E 154	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.20	Water Absorption of Plastics	ASTM D 570	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.21	Resistance of Plastics to Chemical Reagents	ASTM D 543	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.22	Water Vapor Transmission rate	ASTM E 96	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.23	Brittleness Temperature of Plastics and Elastomers by Impact	ASTM D 746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.24	Determination of Durometer Hardness	ASTM D 2240	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.25	Determination of thickness and mass per unit area of Bitumen sheets for roof waterproofing	BS EN 1849-1	-	√*	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-

Geotextiles & Water Proofing Tests (Cont.)

No.	Test	Standard	Laboratory																	
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	DTL	Fugro	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
WATERPROOF MEMBRAINS & PLASTIC LINER TESTING																				
11.26	Determination of thickness and mass per unit area of Plastic and rubber sheets	BS EN 1849-2	-	√*	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
11.27	Dimensions Measurement of Rubber	ASTM D 3767	-	√	-	-	-	-	-	-	-	-	-	-	-	-	√	-	-

Notes: - It is the responsibility of the Engineer and Consultant to ensure the materials testing laboratory proposed by the Contractor is totally independent and has no relationship, inclusive of formal, financial, family or legal, or other with the Contractor or the Contractors Sub-contractors.

- **(√*) means conditional approval**

ملاحظات: - انها مسؤولية مهندس المشروع والاستشاري التأكد من عدم وجود صله بين المختبر المقترح والمقاول أو المقاول من الباطن بأي شكل كان سواء قانوني، مالي، عائلي أو خلافه.

- (√*) تعني اعتماد مشروط ولفتره محدودة.

12. Leakage Testing of Buildings

No.	Test	Standard	Local Labs																
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	Fugro	DTL	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
12.1	Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences	ASTM E283	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.2	Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Static Air Pressure Difference	ASTM E330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.3	Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference	ASTM E331	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.4	Air Permeability of Doors and Windows	BS EN 1026	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.5	Water tightness of Doors and Windows	BS EN 1027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.6	Doors and Windows Resistance to Wind Loads	BS EN 12211	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.7	Air Permeability of Curtain Walling	BS EN 12153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.8	Water Tightness of Curtain Walling under Static Pressure	BS EN 12155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Leakage Testing of Buildings (Cont.)

No.	Test	Standard	Local Labs																	
			ELEMENT	ACES	ACTS	Gulf Lab	Tech Lab	Pioneer	Teyseer	QEL	Fugro	DTL	QGEC	JEL	BATLABS	ITL	QIL	CTL	Ashghal
12.9	Resistance to Wind Load of Curtain Walling	BS EN 12179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.10	Air Permeability of Buildings	BS EN 13829	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.11	Water Penetration using Dynamic Pressure for Windows, Curtain Walls and Doors	AAMA 501.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.12	Water leakage field check for Storefronts, Curtain Walls and Sloped Glazing Systems	AAMA 501.2	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-	-

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- (√*) means conditional approval

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- (√*) تعني اعتماد مشروط ولفتره محدودة.

13.Calibration Laboratories								
Laboratory			Al Bader		LABTECH		PROMPT	
No	Calibration field	Calibration item	Range	CMC	Range	CMC	Range	CMC
01	Mass	Weighing scales	0 to200 g/0.01mg 200to500g/0.01mg 500 to1kg /1mg 1kg to5kg /0.1g 5kg to 50kg /1g 0 to 220g/01mg 0 to 420g/1mg 0 to 510g /1mg 0 to 4200g/10mg 0 to 12000g/10mg 0 to 110Kg/50g 0 to 31Kg/0.1g	0.61mg 3.1mg 6.1mg 0.112g 0.81g 0.16 mg 0.60 mg 0.70 mg 8 mg 10 mg 35 g 0.1 g	0 to 220g /0.0001 g 221to1000 g /0.001 g 0 to 5000 g /0.01 g 0 to 10000g /0.1g 0 to 30 kg 0 to 500 kg 0 to 1500 kg	0.00009 g 0.0017 g 0.01 g 0.06 g 0.0011kg 0.01 kg 0.09 kg		
		OIML Masses	up to 1000mg 1g to1000g 1kg to 20kg	1mg 1.2mg 0.34g				

Laboratory			Al Bader		LABTECH		PROMPT	
No	Calibration field	Calibration item	Range	CMC	Range	CMC	Range	CMC
02	Pressure	Pneumatic pressure gauge			0 to 10000 psi /1psi	0.41%	-1 bar to 120 bar	0.57% FS
		Vacuumed gauge	-1 to 2 bar /0.005 bar	0.07% FS			-1 bar to 200 bar	0.57% FS
		Hydraulic pressure gauge	0 to 70 bar/0.05 bar 0 to 700 bar/0.05 bar 0 bar to 2500 bar/01bar	0.1% FS 0.36% FS 0.12% FS	0 to 10000 psi /1psi	0.41%	0 bar to 140 bar 140 bar to 1200 bar	0.39% FS
03	Force	Compression machines	Up to 3336 kN	0.66%	0 to 100 kN /0.01kN 0 to 3000 kN /0.01 kN	0.12 % 0.07 %		
		Proving rings			0 to 50 kN /0.01 kN	0.25 %		
		Tension load cell						
		Tension machines						

Laboratory			Al Bader		LABTECH		PROMPT	
No	Calibration field	Calibration item	Range	CMC	Range	CMC	Range	CMC
03	Force	Compression testing machine performance test (stability verification)						
		Pull off tester	0 psi to 3500 psi/1psi	5 psi				
		Hydraulic jack						
		Torque						
		Hardness Rockwell hardness machines	Up to 100 HRA/0.5HRA Up to 100 HRC/0.5 HRC Up to 100 HRBW/0.5 HRBW 17.9 HRC to 69.5HRC/ 1HRC	0.9 HRA 1.0 HRC 0.9 HRBW 1 HRC				
		Hardness Vickers hardness machines						
		Hardness Brinell hardness machines						

Laboratory			Al Bader		LABTECH		PROMPT	
No	Calibration field	Calibration item	Range	CMC	Range	CMC	Range	CMC
04	Thermal	Glass thermometer	-40 to 200°C 25 to 650 °C	0.7°C 1.6°C			-30°C to 660°C	0.25 °C
		Prop thermometer, switch gauge, transmitter	-40 to 200°C 25 to 650 °C	0.7°C 1.6°C	0 to 250°C /0.01 ° c	0.11°c	-30°C to 660°C	0.25 °C
		Controllers,	-40 to 200ºC/0.01ºC 25 to 650ºC/0.01ºC	0.7ºC 1.6ºC	-30 to 1600°C /0.01°C -200 to 850°C /0.01°C	0.02°C 0.1°C	-30°C to 660°C	0.25 °C
		Temperature blocks			-40 to 400°C /0.1°C Up to 1000°C /0.1°C	0.13°C 1.20°C		
		Thermocouple Indicators Type K	-40 to 200ºC/0.01ºC 25 to 650ºC/0.01ºC	0.7ºC 1.6ºC	-200 to 1700°C /0.01° C	0.1° C	-250°C to 1372°C	0.46 °C

Laboratory			Al Bader		LABTECH		PROMPT	
No	Calibration field	Calibration item	Range	CMC	Range	CMC	Range	CMC
04	Thermal	Thermocouple Indicators Type J	-210 to 1200ºC/0.01ºC	0.5ºC	-200 to 1700°C /0.01° C	0.1° C	-210°C to 1200°C	0.46°C
		Thermocouple Indicators Type T	-270 to 400ºC/0.01ºC	0.5ºC	-200 to 1700°C /0.01° C	0.1° C	-250°C to 400°C	0.46°C
		Thermocouple Indicators Type R	-50 to 1768ºC/0.01ºC	0.5ºC	-200 to 1700°C /0.01° C	0.1° C	0°C to 1767°C	0.46°C
		Thermocouple Indicators Type S	-50 to 1768ºC/0.01ºC	0.5ºC	-200 to 1700°C /0.01° C	0.1° C	0°C to 1767°C	0.46°C
		Thermocouple Indicators Type N	-270 to 1300ºC/0.01ºC	0.5ºC	-200 to 1700°C /0.01° C	0.1° C	-200°C to 1300°C	0.46°C
		Thermocouple Indicators Type E	-270 to 1000ºC/0.01ºC	0.5ºC	-200 to 1700°C /0.01° C	0.1° C	-250°C to 1000°C	0.46°C
		Non –contact surface thermometer / IR thermometer	-60 °C to 200°C/0.1°C 200°C to 500°C/1°C	1° C 1.5° C				
		Contact type thermometer	0° C to 100° C/0.01° C	0.05° C				

Laboratory			Al Bader		LABTECH		PROMPT	
No	Calibration field	Calibration item	Range	CMC	Range	CMC	Range	CMC
04	Thermal	Ovens freezers Fridge incubators	Up to 600ºC/0.1ºC To 40ºC/0.1ºC Up to100ºC/0.1ºC	0.75ºC 0.6ºC 0.6ºC	30 to 250°C 0 to 20°C /0.1°C 0 TO 90 °C	0.70 ° C 0.70 °C 0.70°C	-195°C to 419°C	0.63°C
		Liquid baths	Up to 600ºC/0.1ºC	0.75ºC	5 to 95 °C /0.1°C	0.32°C		
		Muffle furnaces	Up to 1200ºC/1ºC	4.45ºC	300 to 1000°C	1.20°C		
		Humidity equipment	0% R.H to 95% R.H	3% R.H				
05	Volume	Pipette, micropipette	5 to 1000µL/0.1µL 1mL to 2000mL/0.1mL	3.1µL 5.66mL				

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Laboratory			Al Bader		LABTECH		PROMPT	
No	**Calibration field**	**Calibration item**	**Range**	**CMC**	**Range**	**CMC**	**Range**	**CMC**
06	**Dimensional**	Calipers	0 to 300mm/0.01 mm >300 to 600mm/0.01 mm	12µm 13µm	0 to 150mm /0.01mm	0.007 mm	0 mm to 300mm 0 mm to 300mm	9.0µm 17.8 µm
		Micrometers	0to150mm/0.001mm >150to300mm /0.01mm >300 to 600mm/0.01mm	1.4µm 6.8µm 7.8µm	0 to 25 mm /0.001 mm	0.007 mm	0 mm to 150 mm 0 mm to 150 mm	6.0 µm 1.9µm
		Height gages-length Dial Digital Vernier	0 to 300mm/0.01 mm >300 to 600mm/0.01 mm	8 µm 13µm	0 to 100 mm /0.001 mm	0.0002 mm	0 mm to 600mm 0 mm to 600mm	11.0µm 15.0µm
		Gage blocks-length						
		Cylindrical gage -plugs and pins	Up to 10mm Up to 150mm	3.2µm 3.5µm	0.5to 300mm	0.0012 mm		
		Thread plug gages Pitch diameter Major diameter						

Laboratory			Al Bader		LABTECH		PROMPT	
No	Calibration field	Calibration item	Range	CMC	Range	CMC	Range	CMC
06	Dimensional	Ring gauges-cylindrical &tapered Bore gauge	Up to 2mm	7µm	0 to 200 mm	0.0002m m		
		Length indicators						
		Length standard Metal tape measure	0mm to 1000mm /0.5mm 0mm to 5000mm /1mm	0.6 µm 1.7 mm	0 to 5000 mm /0.5 mm 0 to 50000 mm /0.5 mm	0.12 mm 0.12 mm		
		Coating thickness	Up to1507.15µm Up to 1503.5 µm	1.4 µm 1 µm				
		Surface plates flatness						
		Thickness gauge Feeler gauge	Up to 50mm/0.01 mm Up to 2 mm	7µm 3.3µm	0 to 100 mm /0.001 mm 0.02 to 1mm	0.0002 mm 0.0011 mm	0 mm to 5 mm 0 mm to 25 mm 0 mm to 50 mm 0.01 mm to 2.0 mm	1.0 µm 5.9 µm 6.0 µm 2.7 µm

Laboratory			Al Bader		LABTECH		PROMPT	
No	Calibration field	Calibration item	Range	CMC	Range	CMC	Range	CMC
07	Optical	Optical power measure (6 to 60)Db (10 to 110)dB (10 to 110)dB						
		Optical wavelength measure						
		Fiber Optical wavelength measure						
08	Time/frequency	Stopwatch/timer	Up to24h /0.01 sec	0.3 sec				
		Rotational speed/ Tachometer	1 to 11000 rpm/1rpm	2.5 rpm				
09	Radiation	Nuclear density gauge - density	1775.4 kg/m³ 2101.5kg/m³ 2143.1 kg/m³ 2174.3 kg/m³ 2179.1 kg/m³ 2188.8 kg/m³ 2226.8 kg/m³ 2685.7 kg/m³	0.3 % 1.3 % 1.1 % 1 % 1.2% 1% 0.3 % 0.3%				
		Nuclear density gauge - moisture	531.2 kg/m³ 546.5 kg/m³ 549.5 kg/m³ 564.3 kg/m³ 566.9 kg/m³ 592.5 kg/m³	4 % 4.5% 4% 1.3% 4.9% 4.1%				

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Laboratory			Al Bader		LABTECH		PROMPT	
No	Calibration field	Calibration item	Range	CMC	Range	CMC	Range	CMC
10	Electrical	DC voltage generate	0.001 mV to 329.9999mV /01µV	0.00059%	100 mV	0.0024 mV	0 µA to 329.999 µA	0.04% RDG
					1V	0.0000036V	0 mA to 3.29999 mA	0.02%RDG
					10 V	0.00006V	0 mA to 32.9999 mA	0.06% RDG
			0.00001 V to 3.299999V/1µV	0.00065%	100V	0.0008V	0 mA to 329.999 mA	0.02% RDG
					1000 V	0.0017 V	0 A to 1.09999 A	0.06% RDG
			0.00001 V to 32.99999V/10µV	0.00050%			1.1 A to 2.99999 A	0.11% RDG
							0 A to 10.9999 A	0.08% RDG
			30 V to 329.9999V/100µV	0.00043%			11 A to 20.5 A	0.08% RDG
							300 A to 1000 A	0.5% RDG
			100V to 1020.0V/1000µV	0.00040%				
		DC voltage measure	30.003 mV to 100 mV/100 mV	0.84%	100 mV	0.0024 mV	100 mV	0.006% RDG
					1V	0.0000036V	1 V	0.006% RDG
			0.006 mV to 1V/1µV	0.37%	10 V	0.00006V	10 V	0.02% RDG
			0.004 V to 10V/10µV	0.33%	100V	0.0008V	100 V	0.02% RDG
			0.006 V to 100V /100µV	0.51%	1000 V	0.0017 V	1000 V	0.02% RDG
			0.006 V to 1000V/1mV	0.59%				
		Resistance measure	0.03 Ω to 10Ω/10µΩ	0.35%	0 Ω to 10 Ω	0.006 Ω	10 Ω	0.36% RDG
			3.003 Ω to 100Ω/100µΩ	0.0074%	0 Ω to 100 Ω	0.06 Ω	100 Ω	0.23% RDG
			0.05 kΩ to 1kΩ/1mΩ	0.0015%	0 Ω to 1000 Ω	0.6 Ω	1 kΩ	0.23% RDG
			0.05 kΩ to 10kΩ/10 mΩ	0.0019%	0 Ω to 10 kΩ	0.006 kΩ	10 kΩ	0.73% RDG
			0.05 kΩ to100kΩ/100mΩ	0.0014%	0 Ω to 100 kΩ	0.06 kΩ	100 kΩ	0.73% RDG
			0.01 MΩ to 1MΩ/1Ω	0.0012%	0 Ω to 1000 kΩ	0.6 kΩ	1MΩ	0.73% RDG
			0.01 MΩ to 10MΩ/10Ω	0.0019%	0 Ω to 10 MΩ	0.006 MΩ	10 MΩ	0.73% RDG
			0.4 MΩ to 100MΩ/100Ω	0.0002%	0 Ω to 100 MΩ	0.065 MΩ	100 MΩ	1.37% RDG
			1.01 GΩ to 1GΩ/1kΩ	0.0043%	0 Ω to 1 GΩ	0.0006 GΩ	1.0 GΩ	1.37% RDG

14. Approved Site Laboratories

S.NO	Laboratory	Project	Field	Test	Standard
1	ACES	Roads &Infrastructure In Doha Industrial Area- Package - 01	1. Soil Tests	(*)Particle Size Distribution (Wet Sieving Method)	BS 1377 Part 2: Sec. 9.2
				(*)Particle Size Distribution (Dry Sieving Method)	BS 1377 Part 2: Sec. 9.3
				(*)Dry Density/Moisture Content Relationship	BS 1377 Part 4 :Sec.3.5/3.6
				(*)In-Situ Density Test (Sand Replacement Method – Large Pouring Cylinder)	BS 1377 Part 9: Sec. 2.2
				(*)Determination of California Bearing Ratio (CBR)	BS 1377 Part4: Sec. 7
				(*)Sand Equivalent Value	ASTM D2419
				(*)Determination of Moisture Content (Oven Drying)	BS 1377 Part 2: Sec. 3.2
				(*)Determination of Liquid Limit (Cone Penetrometer)	BS 1377 Part 2: Sec. 4.3
				(*)Determination of Liquid Limit (Casagrande Method)	BS 1377 Part 2: Sec. 4.5
				(*)Determination of Plastic Limit and Plasticity Index	BS 1377 Part 2: Sec. 5

S.NO	Laboratory	Project	Field	Test	Standard
1	ACES	Roads &Infrastructure In Doha Industrial Area-Package - 01	2. Concrete Tests	(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Test for Temperature of Fresh Concrete	ASTM C1064
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Slump Test	BS EN 12350 Part 2
			3. Asphalt Tests	(*)Quantitative Extraction of Bitumen from Bituminous Paving Mixtures	ASTM D2172
				(*)Maximum Specific Gravity and Density	ASTM D2041
				(*)Sampling of Bituminous Mixtures	ASTM D979
				(*)Sampling Compacted Bituminous Mixtures for Laboratory Testing	ASTM D5361
				(*)Preparation of Specimens Using Marshall Apparatus	ASTM D6926
				(*)Mechanical Size Analysis of Extracted Aggregate	ASTM D5444
				(*)Marshall Stability and Flow of Bituminous Mixtures	ASTM D6927
				(*)Bulk Specific Gravity and Density	ASTM D2726
				(*)Thickness of Asphalt Specimen	ASTM D3549

S.NO	Laboratory	Project	Field	Test	Standard
2	ACES	New Orbital Highway – truck route-P0234-C03	1. Soil Tests	(*)Particle Size Distribution (Wet Sieving Method)	BS 1377 Part 2: Sec. 9.2
				(*)Particle Size Distribution (Dry Sieving Method)	BS 1377 Part 2: Sec. 9.3
				(*)Dry Density/Moisture Content Relationship	BS 1377 Part 4 :Sec.3.5/3.6
				(*)In-Situ Density Test (nuclear gauge Method	BS 1377 Part 9: Sec. 2.5
				(*)Determination of California Bearing Ratio (CBR)	BS 1377 Part4: Sec. 7
				(*)Sand Equivalent Value	ASTM D2419
				(*)Determination of Moisture Content (Oven Drying)	BS 1377 Part 2: Sec. 3.2
				(*)Determination of Liquid Limit (Casagrande Method)	BS 1377 Part 2: Sec. 4.5
				(*)Determination of Plastic Limit and Plasticity Index	BS 1377 Part 2: Sec. 5
				(*)Method of Test for Cement Stabilized Materials	BS 1924 Part 2
			2. Asphalt Tests	(*)Bulk Specific Gravity and Density	ASTM D2726
				(*)Quantitative Extraction of Bitumen from Bituminous Paving Mixtures	ASTM D2172
				(*)Application Rate of Bituminous Distributors	ASTM D2995
				(*)Sampling Compacted Bituminous Mixtures for Laboratory Testing	ASTM D5361

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S.NO	Laboratory	Project	Field	Test	Standard
2	ACES	New Orbital Highway – truck route-P0234-C03	2.Asphalt Tests	(*)Sampling of Bituminous Mixtures	ASTM D979
				(*)Maximum Specific Gravity and Density	ASTM D2041
				(*)Preparation of Specimens Using Marshall Apparatus	ASTM D6926
				(*)Marshall Stability and Flow of Bituminous Mixtures	ASTM D6927
				(*)Mechanical Size Analysis of Extracted Aggregate	ASTM D5444
				(*)Thickness of Asphalt Specimen	ASTM D3549

S.NO	Laboratory	Project	Field	Test	Standard
3	ACES	Design & Construction Of Al Bustan Street North (P007-C7 P2)	1. Concrete Tests	(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Slump Test	BS EN 12350 Part 2
				(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Obtaining and Testing of Drilled Cores	BS EN 12504 Part 1
			2. Asphalt Tests	(*)Sampling of Bituminous Mixtures	ASTM D979
				(*)Sampling Compacted Bituminous Mixtures for Laboratory Testing	ASTM D5361
				(*)Bulk Specific Gravity and Density	ASTM D2726
				(*)Maximum Specific Gravity and Density	ASTM D2041
				(*)Quantitative Extraction of Bitumen from Bituminous Paving Mixtures	ASTM D2172
				(*)Mechanical Size Analysis of Extracted Aggregate	ASTM D5444
				(*)Preparation of Specimens Using Marshall Apparatus	ASTM D6926
				(*)Marshall Stability and Flow of Bituminous Mixtures	ASTM D6927
				(*)Thickness of Asphalt Specimen	ASTM D3549

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S.NO	Laboratory	Project	Field	Test	Standard
3	ACES	Design & Construction Of Al Bustan Street North (P007-C7 P2)	3. Soil Tests	(*)Particle Size Distribution	ASTM D6913
				(*)Materials Finer than No. 200 (0.075mm) Sieve	ASTM D1140
				(*)Liquid Limit, Plastic Limit and Plasticity Index of Soil	ASTM D4318
				(*)Lab Compaction Test using Modified Effort	ASTM D1557
				(*)Correction of Density and Water Content for Soils	ASTM D4718
				(*)Determination of California Bearing Ratio (CBR)	ASTM D1883
				(*)Determination of Moisture Content	ASTM D2216
				(*)Field Density (Sand Cone)	ASTM D1556
				(*)Sand Equivalent Value	ASTM D2419
			4. Aggregate Tests	(*)Sampling of Aggregates	ASTM D75
				(*)Reducing Samples to Testing Size	ASTM C702
				(*)Sampling of Aggregates (From Heaps)	BS 812 Part 102
				(*)Particle Size Distribution	ASTM C136
				(*)Material Finer than 0.075 mm	ASTM C117
				(*)Determination of Specific Gravity and Water Absorption of Fine Aggregate	ASTM C128
				(*)Determination of Specific Gravity and Water Absorption of Coarse Aggregate	ASTM C127
				(*)Flat and Elongated Particles	ASTM D4791

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S.NO	Laboratory	Project	Field	Test	Standard
3	ACES	Design & Construction Of Al Bustan Street North (P007-C7 P2)	4.Aggregate Tests	(*)Clay Lumps and Friable Particles	ASTM C142
				(*)Flakiness Index	BS EN 933 Part 3
				(*)Material Finer than 0.063 mm	BS EN 933 Part 1
				(*)Determination of Shell Content	BS EN 933 Part 7
				(*)Determination of Aggregate Crushing Value	BS 812 Part 110
				(*)Determination of Ten Percent Value	BS 812 Part 111
				(*)Determination of Particle Density and Water Absorption	BS EN 1097 Part 6
				(*)Magnesium Sulphate Soundness	ASTM C88

S.NO	Laboratory	Project	Field	Test	Standard
4	ACES	Al Khore Expressway (16-031)	1. Asphalt Tests	(*)Sampling of Bituminous Mixtures	ASTM D979
				(*)Sampling Compacted Bituminous Mixtures for Laboratory Testing	ASTM D5361
				(*)Preparation of Specimens Using Marshall Apparatus	ASTM D6926
				(*)Bulk Specific Gravity and Density	ASTM D2726
				(*)Maximum Specific Gravity and Density	ASTM D2041
				(*)Thickness of Asphalt Specimen	ASTM D3549
				(*)Marshall Stability and Flow of Bituminous Mixtures	ASTM D6927
				(*)Quantitative Extraction of Bitumen from Bituminous Paving Mixtures	ASTM D2172
				(*)Mechanical Size Analysis of Extracted Aggregate	ASTM D5444
				(*)Application Rate of Bituminous Distributors	ASTM D2995

S.NO	Laboratory	Project	Field	Test	Standard
5	ACES	Construction and upgrade of Mesaimeer Road (P008-C3)	1. Aggregate Tests	(*)Sampling of Aggregates	ASTM D75
				(*)Reducing Samples to Testing Size	ASTM C702
				(*)Sampling of Aggregates (From Heaps)	BS 812 Part 102
				(*)Particle Size Distribution	ASTM C136
				(*)Material Finer than 0.075 mm	ASTM C117
				(*)Determination of Specific Gravity and Water Absorption of Fine Aggregate	ASTM C128
				(*)Determination of Specific Gravity and Water Absorption of Coarse Aggregate	ASTM C127
				(*)Flat and Elongated Particles	ASTM D4791
				(*)Clay Lumps and Friable Particles	ASTM C142
				(*)Material Finer than 0.063 mm	BS EN 933 Part 1
				(*)Determination of Shell Content	BS EN 933 Part 7
				(*)Determination of Aggregate Crushing Value	BS 812 Part 110
				(*)Determination of Ten Percent Value	BS 812 Part 111
				(*)Sieve Analysis of Mineral Filler	ASTM D546

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S.NO	Laboratory	Project	Field	Test	Standard
5	ACES	Construction and upgrade of Mesaimeer Road (P008-C3)	2. Soil tests	(*)Particle Size Distribution	ASTM D6913
				(*)Materials Finer than No. 200 (0.075mm) Sieve	ASTM D1140
				(*)Liquid Limit, Plastic Limit and Plasticity Index of So	ASTM D4318
				(*)Lab Compaction Test using Modified Effort	ASTM D1557
				(*)Correction of Density and Water Content for Soils	ASTM D4718
				(*)Determination of California Bearing Ratio (CBR)	ASTM D1883
				(*)Determination of Moisture Content	ASTM D2216
				(*)Field Density (Sand Cone)	ASTM D1556
				(*)Sand Equivalent Value	ASTM D2419
			3. Asphalt tests	(*)Sampling of Bituminous Mixtures	ASTM D979
				(*)Sampling Compacted Bituminous Mixtures for Laboratory Testing	ASTM D5361
				(*)Preparation of Specimens Using Marshall Apparatus	ASTM D6926
				(*)Bulk Specific Gravity and Density	ASTM D2726
				(*)Maximum Specific Gravity and Density	ASTM D2041
				(*)Thickness of Asphalt Specimen	ASTM D3549
				(*)Marshall Stability and Flow of Bituminous Mixtures	ASTM D6927
				(*)Quantitative Extraction of Bitumen from Bituminous Paving Mixtures	ASTM D2172

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S.NO	Laboratory	Project	Field	Test	Standard
5	ACES	Construction and upgrade of Mesaimeer Road (P008-C3)	3.Asphalt tests	(*)Mechanical Size Analysis of Extracted Aggregate	ASTM D5444
				(*)Application Rate of Bituminous Distributors	ASTM D2995
			4. Concrete tests	(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Slump Test	BS EN 12350 Part 2
				(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Obtaining and Testing of Drilled Cores	BS EN 12504 Part 1

S.NO	Laboratory	Project	Field	Test	Standard
6	Tech-Lab	Construction and Upgrade of Rayyan Road Project (Code:007,C2)	1.Soil Tests	(*)Determination of Moisture Content (Oven Drying)	BS 1377 Part 2: Sec. 3.2
				(*)Particle Size Distribution (Wet Sieving Method)	BS 1377 Part 2: Sec. 9.2
				(*)Particle Size Distribution (Dry Sieving Method)	BS 1377 Part 2: Sec. 9.3
				(*)Dry Density/Moisture Content Relationship	BS 1377 Part 4 :Sec.3.5/3.6
				(*)Determination of Liquid Limit (Cone Penetrometer)	BS 1377 Part 2: Sec. 4.3
				(*)Determination of Plastic Limit and Plasticity Index	BS 1377 Part 2: Sec. 5
				(*)Determination of California Bearing Ratio (CBR)	BS 1377 Part4: Sec. 7
				(*)In-Situ Density Test (Sand Replacement Method – Large Pouring Cylinder)	BS 1377 Part 9: Sec. 2.2
				(*)In-Situ Density Test (Nuclear Gauge Method)	BS 1377 Part 9: Sec. 2.5
				(*)In-Situ Density Test (Nuclear Gauge Method)	ASTM D 6938

S.NO	Laboratory	Project	Field	Test	Standard
6	Tech-Lab	Construction and Upgrade of Rayyan Road Project (Code:007,C2)	1.Soil Tests	(*)Reducing Samples to Testing Size	ASTM C702
				(*)Sand Equivalent Value	ASTM D2419
				(*)Determination of Plastic Limit, Liquid Limit and Plasticity Index	ASTM D4318
				(*)Determination of Moisture Content	ASTM D2216
				(*)Particle Size Distribution	ASTM D6913
				(*)Materials Finer than No. 200 (0.075mm) Sieve	ASTM D1140
			2.Aggregate Tests	(*)Sampling of Aggregates (From Heaps)	BS 812 Part 102
				(*)Sampling of Aggregates	ASTM D75
				(*)Particle Size Distribution (Wet)	BS 812 Part 103.1-9.2
				(*)Particle Size Distribution	BS EN 933 Part 1
				(*)Particle Density and Water Absorption (All larger than 10mm aggregate)	BS 812 Part 2–5.3
				(*)Determination of Particle Density and Water Absorption	BS EN 1097 Part 6
				(*)Particle Density and Water Absorption (5-40mm aggregate)	BS 812 Part 2–5.4

S.NO	Laboratory	Project	Field	Test	Standard
6	Tech-Lab	Construction and Upgrade of Rayyan Road Project (Code:007,C2)	2.Aggregate Tests	(*)Particle Density and Water Absorption (10mm aggregate and smaller)	BS 812 Part 2–5.5
				(*)Determination of Aggregate Crushing Value	BS 812 Part 110
				(*)Determination of Ten Percent Value	BS 812 Part 111
				(*)Clay Lumps and Friable Particles	ASTM C142
				(*)Material Finer than 0.075 mm	ASTM C117
				(*)Determination of Specific Gravity and Water Absorption of coarse Aggregate.	ASTM C127
				(*)Determination of Specific Gravity and Water Absorption of Fine Aggregate	ASTM C128
				(*)Material Finer than 0.063 mm	BS EN 933 Part 1
				(*)Determination of Shell Content	BS EN 933 Part 7
				(*)Determination of Moisture Content (Oven Drying)	BS 812 Part 109: Sec.6
				(*)Percentage of Fractured Particles	ASTM D5821
				(*)Magnesium Sulphate Soundness	ASTM C88
			3.Concrete Tests	(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Slump Test	BS EN 12350 Part 2
				(*)Density of Hardened Concrete	BS EN 12390 Part 7

S.NO	Laboratory	Project	Field	Test	Standard
6	Tech-Lab	Construction and Upgrade of Rayyan Road Project (Code:007,C2	3.Concrete Tests	(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Test for Temperature of Fresh Concrete	ASTM C1064
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Water Penetration Test	BS EN 12390 Part 8
				(*)Resistance to Chloride Ion Penetration	ASTM C1202
				(*)Water Absorption Test	BS 1881 Part 122

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S.NO	Laboratory	Project	Field	Test	Standard
7	Tech-Lab	Design & Construction of Al Khor Expressway project code 16-031	1. Soil Tests	(*)Reducing Samples to Testing Size	ASTM C702
				(*)Determination of Moisture Content	ASTM D2216
				(*)Particle Size Distribution	ASTM D6913
				(*)Determination of Plastic Limit, Liquid Limit and Plasticity Index	ASTM D4318
				(*)Lab Compaction Test using Modified Effort	ASTM D1557
				(*)Correction of Density and Water Content for Soils	ASTM D4718
				(*)Field Density (Sand Cone)	ASTM D1556
				(*)Field Density (Nuclear)	ASTM D6938
				(*)Determination of California Bearing Ratio (CBR)	ASTM D1883
				(*)Sand Equivalent Value	ASTM D2419
				(*)Determination of Moisture Content (Oven Drying)	BS 1377 Part 2: Sec. 3.2
				(*)Particle Size Distribution (Wet Sieving Method)	BS 1377 Part 2: Sec. 9.2
				(*)Particle Size Distribution (Dry Sieving Method)	BS 1377 Part 2: Sec. 9.3
				(*)Dry Density/Moisture Content Relationship	BS 1377 Part 4 :Sec.3.5/3.6
				(*)Determination of Liquid Limit (Cone Penetrometer)	BS 1377 Part 2: Sec. 4.3

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S.NO	Laboratory	Project	Field	Test	Standard
7	Tech-Lab	Design & Construction of Al Khor Expressway project code 16-031	1. Soil Tests	(*)Determination of Plastic Limit and Plasticity Index	BS 1377 Part 2: Sec. 5
				(*)Determination of California Bearing Ratio (CBR)	BS 1377 Part4: Sec. 7
				(*)In-Situ Density Test (Sand Replacement Method - Small Pouring Cylinder)	BS 1377 Part 9: Sec. 2.1
				(*)In-Situ Density Test (Sand Replacement Method – Large Pouring Cylinder)	BS 1377 Part 9: Sec. 2.2
				(*)In-Situ Density Test (Nuclear Gauge Method)	BS 1377 Part 9: Sec. 2.5
				(*)In Place Moisture Content (Calcium Carbide Tester)	ASTM D4944
				(*)California Bearing Ratio (CBR) Test	BS 1377 Part 9-Sec. 4.3
			2.Aggregate Tests	(*)Sampling of Aggregates	ASTM D75
				(*)Sampling of Aggregates (From Heaps)	BS 812 Part 102
				(*)Particle Size Distribution	ASTM C136
				(*)Material Finer than 0.075 mm	ASTM C117
				(*)Determination of Specific Gravity and Water Absorption of Fine Aggregate	ASTM C128
				(*)Determination of Specific Gravity and Water Absorption of Coarse Aggregate	ASTM C127
				(*)Magnesium Sulphate Soundness	ASTM C88
				(*)Determination of Moisture Content (Oven Drying)	BS 812 Part 109: Sec.6
				(*)Determination of Particle Density and Water Absorption	BS EN 1097 Part 6

S.NO	Laboratory	Project	Field	Test	Standard
7	Tech-Lab	Design & Construction of Al Khor Expressway project code 16-031	2.Aggregate Tests	(*)Particle Density and Water Absorption (All larger than 10mm aggregate)	BS 812 Part 2–5.3
				(*)Particle Density and Water Absorption (5-40mm aggregate)	BS 812 Part 2–5.4
				(*)Particle Density and Water Absorption (10mm aggregate and smaller)	BS 812 Part 2–5.5
				(*)Particle Size Distribution	BS EN 933 Part 1
				(*)Particle Size Distribution (Wet)	BS 812 Part 103.1-7.2
				(*)Particle Size Distribution (Dry)	BS 812 Part 103.1-7.3
				(*)Material Finer than 0.075 mm	BS EN 933 Part 1
				(*)Material Finer than 0.063 mm	BS EN 933 Part 1
				(*)Determination of Shell Content	BS EN 933 Part 7
				(*)Determination of Aggregate Crushing Value	BS 812 Part 110
				(*)Determination of Ten Percent Value	BS 812 Part 111
			3.Concrete tests	(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Slump Test	BS EN 12350 Part 2
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1

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S.NO	Laboratory	Project	Field	Test	Standard
7	Tech-Lab	Design & Construction of Al Khor Expressway project code 16-031	3.Concrete tests	(*)Test for Temperature of Fresh Concrete	ASTM C1064
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Water Penetration Test	BS EN 12390 Part 8
				(*)Resistance to Chloride Ion Penetration	ASTM C1202
				(*)Water Absorption Test	BS 1881 Part 122

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S.NO	Laboratory	Project	Field	Test	Standard
8	Gulf Labs	Al Muntazah Street Extension (Package 13)	1. Soil Tests	(*)Determination of Moisture Content (Oven Drying)	BS 1377 Part 2: Sec. 3.2
				(*)Particle Size Distribution (Wet Sieving Method)	BS 1377 Part 2: Sec. 9.2
				(*)Particle Size Distribution (Dry Sieving Method)	BS 1377 Part 2: Sec. 9.3
				(*)Dry Density/Moisture Content Relationship	BS 1377 Part 4 :Sec.3.5/3.6
				(*)Determination of Liquid Limit (Casagrande Method)	BS 1377 Part 2: Sec. 4.5
				(*)Determination of Plastic Limit and Plasticity Index	BS 1377 Part 2: Sec. 5
				(*)In-Situ Density Test (Nuclear Gauge Method)	BS 1377 Part 9: Sec. 2.5
				(*)Determination of California Bearing Ratio (CBR)	BS 1377 Part4: Sec. 7
			2. Aggregate Tests	(*)Determination of Moisture Content (Oven Drying)	BS 812 Part 109: Sec.6
				(*)Sampling of Aggregates (From Heaps)	BS 812 Part 102
				(*)Particle Size Distribution (Wet)	BS 812 Part 103.1-9.2

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S.NO	Laboratory	Project	Field	Test	Standard
8	Gulf Labs	Al Muntazah Street Extension (Package 13)	2. Aggregate Tests	(*)Particle Density and Water Absorption (10mm aggregate and smaller)	BS 812 Part 2–5.5
				(*)Particle Density and Water Absorption (5-40mm aggregate)	BS 812 Part 2–5.4
				(*)Determination of Specific Gravity and Water Absorption of Fine Aggregate	ASTM C128
				(*)Los Angeles Abrasion	ASTM C131/ASTM C535
				(*)Flakiness Index	BS 812 Part 105.1
				(*)Elongation Index	BS 812 Part 105.2
			3. Concrete Tests	(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Slump Test	BS EN 12350 Part 2

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S.NO	Laboratory	Project	Field	Test	Standard
9	Gulf Labs	West Corridor P-010 (Package 1)	1. Soil Tests	(*)In-Situ Density Test (Nuclear Gauge Method)	BS 1377 Part 9: Sec. 2.5
			2. Concrete Tests	(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Test for Temperature of Fresh Concrete	BS EN 12350 Part 1
				(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Slump Test	BS EN 12350 Part 2
				(*)Air Content Test for Fresh Concrete by Pressure Method	BS EN 12350 Part 7
				(*)Flow Table Test	BS EN 12350 Part 5

S.NO	Laboratory	Project	Field	Test	Standard
9	Gulf Labs	West Corridor P-010 (Package 1)	3. Asphalt Tests	(*)Sampling of Asphalt	BS EN 12697 Part 27
				(*)Preparation of Samples for Testing	BS EN 12697 Part 28
				(*)Specimen Preparation by Impact Compactor	BS EN 12697 Part 30
				(*)Soluble Binder Content	BS EN 12697 Part 1
				(*)Marshal Test	BS EN 12697 Part 34
				(*)Determination of Thickness of Specimen	BS EN 12697 Part 36
				(*)Temperature Measurement	BS EN 12697 Part 13
				(*)Determination of Maximum Density	BS EN 12697 Part 5
				(*)Determination of Bulk Density	BS EN 12697 Part 6
				(*)Determination of Dimensions of Specimen	BS EN 12697 Part 29
				(*)Determination of Void Characteristics	BS EN 12697 Part 8

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S.NO	Laboratory	Project	Field	Test	Standard
10	Gulf Labs	Independent site laboratory for New Doha port to orbital highway (P-023 Contract 1)	1. Soil Tests	(*)Particle Size Distribution (Wet Sieving Method)	BS 1377 Part 2: Sec. 9.2
				(*)Dry Density/Moisture Content Relationship	BS 1377 Part 4 :Sec.3.5/3.6
				(*)Determination of Liquid Limit (Cone Penetrometer)	BS 1377 Part 2: Sec. 4.3
				(*)Determination of Plastic Limit and Plasticity Index	BS 1377 Part 2: Sec. 5
				(*)Determination of California Bearing Ratio (CBR)	BS 1377 Part4: Sec. 7
				(*)In-Situ Density Test (Sand Replacement Method – Large Pouring Cylinder)	BS 1377 Part 9: Sec. 2.2
				(*)Determination of Moisture Content	ASTM D2216
				(*)Liquid Limit, Plastic Limit and Plasticity Index of Soil	ASTM D4318
				(*)Determination of California Bearing Ratio (CBR)	ASTM D1883
				(*)Method of Test for Cement Stabilized Materials	BS 1924 Part 2
				(*)Compressive Strength of Rock Core Specimen	ASTM D7012

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S.NO	Laboratory	Project	Field	Test	Standard
10	Gulf Labs	Independent site laboratory for New Doha port to orbital highway (P-023 Contract 1)	2. Concrete Tests	(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Slump Test	BS EN 12350 Part 2
			3.Asphalt Tests	(*)Sampling of Bituminous Mixtures	ASTM D979
				(*)Quantitative Extraction of Bitumen	ASTM D2172
				(*)Soluble Binder Content	BS EN 12697 Part 1
				(*)Particle Size Distribution	BS EN 12697 Part 2
				(*)Determination of Bulk Density	BS EN 12697 Part 6
				(*)Determination of Thickness of Specimen	BS EN 12697 Part 36
				(*)Specimen Preparation by Impact Compactor	BS EN 12697 Part 30
				(*)Marshal Test	BS EN 12697 Part 34
				(*)Asphalt core drilling	BS EN 12697
				(*)Maximum Specific Gravity and Density	ASTM D2041
				(*)Mechanical Size Analysis of Extracted Aggregate	ASTM D5444

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S.NO	Laboratory	Project	Field	Test	Standard
10	Gulf Labs	Independent site laboratory for New Doha port to orbital highway (P-023 Contract 1)	4. Aggregate Tests	(*)Particle Size Distribution	BS EN 933 Part 1
				(*)Material Finer than 0.075 mm	ASTM C117
				(*)Clay Lumps and Friable Particles	ASTM C142
				(*)Flat and Elongated Particles	ASTM D4791
				(*)Flakiness Index	BS EN 933 Part 3/ BS 812 Part 105.1
				(*)Elongation Index	BS 812 Part 105.2/ BS EN 933 Part 4
				(*)Determination of Shell Content	BS EN 933 Part 7
				(*)Los Angeles Abrasion	ASTM C131
				(*)Magnesium Sulphate Soundness	ASTM C88
				(*)Sand Equivalent Value	ASTM D2419

S.NO	Laboratory	Project	Field	Test	Standard
11	Gulf Labs	Dukhan Road – East Contract	1. Soil Tests	(*)Determination of Moisture Content	ASTM D2216
				(*)Particle Size Distribution	ASTM D6913
				(*)Lab Compaction Test using Modified Effort	ASTM D1557
				(*)Liquid Limit, Plastic Limit and Plasticity Index of Soil	ASTM D4318
				(*)Determination of California Bearing Ratio (CBR)	ASTM D1883
				(*)Sand Equivalent Value	ASTM D2419
				(*)Materials Finer than No. 200 (0.075mm) Sieve	ASTM D1140
				(*)Determination of Moisture Content (Oven Drying)	BS 1377 Part 2: Sec. 3.2
				(*)Particle Size Distribution (Wet Sieving Method)	BS 1377 Part 2: Sec. 9.2
				(*)Particle Size Distribution (Dry Sieving Method)	BS 1377 Part 2: Sec. 9.3
				(*)Dry Density/Moisture Content Relationship	BS 1377 Part 4 :Sec.3.5/3.6
				(*)Determination of Liquid Limit (Casagrande Method)	BS 1377 Part 2: Sec. 4.5
				(*)Determination of Plastic Limit and Plasticity Index	BS 1377 Part 2: Sec. 5
				(*)Determination of California Bearing Ratio (CBR)	BS 1377 Part4: Sec. 7
				(*)In-Situ Density Test (Nuclear Gauge Method)	BS 1377 Part 9: Sec. 2.5

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S.NO	Laboratory	Project	Field	Test	Standard
11	Gulf Labs	Dukhan Road – East Contract	1. Soil Tests	(*)In-Situ Density Test (Sand Replacement Method – Large Pouring Cylinder)	BS 1377 Part 9: Sec. 2.2
			2. Aggregate Tests	(*)Sampling of Aggregates	ASTM D75
				(*)Reducing Samples to Testing Size	ASTM C702
				(*)Flat and Elongated Particles	ASTM D4791
				(*)Particle Size Distribution	ASTM C136
				(*)Material Finer than 0.075 mm	ASTM C117
				(*)Determination of Specific Gravity and Water Absorption of Fine Aggregate	ASTM C128
				(*)Determination of Specific Gravity and Water Absorption of Coarse Aggregate	ASTM C127
				(*)Clay Lumps and Friable Particles	ASTM C142
				(*)Percentage of Fractured Particles	ASTM D5821
				(*)Uncompacted Void Content of Fine Aggregate	AASHTO T304
				(*)Sampling of Aggregates (From Heaps)	BS 812 Part 102
				(*)Determination of Particle Density and Water Absorption	BS EN 1097 Part 6
				(*)Particle Size Distribution	BS EN 933 Part 1

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S.NO	Laboratory	Project	Field	Test	Standard
11	Gulf Labs	Dukhan Road – East Contract	2.Aggregate Tests	(*)Flakiness Index	BS EN 933 Part 3
				(*)Elongation (Shape) Index	BS EN 933 Part 4
				(*)Determination of Aggregate Crushing Value	BS 812 Part 110
				(*)Determination of Ten Percent Value	BS 812 Part 111
				(*)Determination of Shell Content	BS EN 933 Part 7
				(*)Sand Equivalent Value	BS EN 933 Part 8
				(*)Particle Size Distribution (Wet)	BS 812 Part 103.1-7.2
				(*)Determination of Aggregate Impact Value	BS 812 Part 112
			3.Concrete Tests	(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Slump Test	BS EN 12350 Part 2
				(*)Obtaining and Testing of Drilled Cores	BS EN 12504 Part 1
				(*)Water Absorption Test	BS 1881 Part 122
				(*)Slump Test	ASTM C143

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S.NO	Laboratory	Project	Field		
11	Gulf Labs	Dukhan Road – East Contract	3.Concrete Tests	(*)Test for Temperature of Fresh Concrete	ASTM C1064
				(*)Making and Curing of Concrete Tests Specimen	ASTM C31
			4.Asphalt Tests	(*)Sampling of Bituminous Mixtures	ASTM D979
				(*)Sampling Compacted Bituminous Mixtures for Laboratory Testing	ASTM D5361
				(*)Maximum Specific Gravity and Density	ASTM D2041
				(*)Bulk Specific Gravity and Density	ASTM D2726
				(*)Density of Bituminous Concrete in Place by Nuclear Methods	ASTM D2950
				(*)Sieve Analysis of Mineral Filler	ASTM D546
				(*)Preparation of Specimens Using Marshall Apparatus	ASTM D6926
				(*)Marshall Stability and Flow of Bituminous Mixtures	ASTM D6927
				(*)Bulk Specific Gravity and Density Using Coated Samples	ASTM D1188
				(*)Thickness of Asphalt Specimen	ASTM D3549
				(*)Quantitative Extraction of Bitumen from Bituminous Paving Mixtures	ASTM D2172
				(*)Application Rate of Bituminous Distributors	ASTM D2995
				(*)Sampling of Asphalt	BS EN 12697 Part 27
				(*)Preparation of Samples for Testing Specimen	BS EN 12697 Part 28
				(*)Preparation by Impact Compactor	BS EN 12697 Part 30
				(*)Soluble Binder Content	BS EN 12697 Part 1

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S.NO	Laboratory	Project	Field	Test	Standard
11	Gulf Labs	Dukhan Road – East Contract	4.Asphalt Tests	(*)Particle Size Distribution	BS EN 12697 Part 2
				(*)Determination of Dimensions of Specimen	BS EN 12697 Part 29
				(*)Determination of Maximum Density	BS EN 12697 Part 5
				(*)Determination of Bulk Density	BS EN 12697 Part 6
				(*)Determination of Void Characteristics	BS EN 12697 Part 8
				(*)Determination of Reference Density	BS EN 12697 Part 9
				(*)Temperature Measurement	BS EN 12697 Part 13
				(*)Determination of Thickness of Specimen	BS EN 12697 Part 36
				(*)Marshal Test	BS EN 12697 Part 34
				(*)Laboratory Mixing	BS EN 12697 Part 35

S.NO	Laboratory	Project	Field	Test	Standard
12	Doha technical laboratories	P003-LUSAIL Expressway	1. Soil Tests	(*)Particle Size Distribution (Wet Sieving Method)	BS 1377 Part 2: Sec. 9.2
				(*)Dry Density/Moisture Content Relationship	BS 1377 Part 4 :Sec.3.5/3.6
				(*)Determination of Liquid Limit (Cone Penetrometer)	BS 1377 Part 2: Sec. 4.3
				(*)Determination of Plastic Limit and Plasticity Index	BS 1377 Part 2: Sec. 5
				(*)Determination of California Bearing Ratio (CBR)	BS 1377 Part4: Sec. 7
			2. Aggregate Tests	(*)Sampling of Aggregates (From Heaps)	BS 812 Part 102
				(*)Sampling of Aggregates	BS EN 932 Part 1
			3. Concrete Tests	(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Slump Test	BS EN 12350 Part 2
				(*)Sampling of Fresh Concrete	BS EN 12350 Part 1

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S.NO	Laboratory	Project	Field	Test	Standard
12	Doha technical laboratories	P003-LUSAIL Expressway	3. Concrete Tests	(*)Slump Test	ASTM C143
				(*)Air Content Test for Fresh Concrete by Pressure Method	ASTM C231
				(*)Density Determination for Fresh Concrete	ASTM C138
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Test for Temperature of Fresh Concrete	ASTM C1064
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3

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S.NO	Laboratory	Project	Field	Test	Standard
13	Doha technical laboratories	DBOM Of Al Dhakira sewage treatment works- IA-D 13/14 DCOM 03 G - CP-652	1. Concrete Tests	(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Slump Test	BS EN 12350 Part 2
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Water Penetration Test	BS EN 12390 Part 8
				(*)Water Absorption Test	BS 1881 Part 122
				(*)Initial Surface Absorption (ISAT)	BS 1881 Part 208
				(*)Obtaining and Testing of Drilled Cores	BS EN 12504 Part 1
				(*)Chloride Penetration Test	NT Build 492
				(*)Obtaining and Testing of Drilled Cores and Sawed Beams	ASTM C42
				(*)Resistance to Chloride Ion Penetration	ASTM C1202

S.NO	Laboratory	Project	Field	Test	Standard
14	Doha technical laboratories	Roads and infrastructure of Doha Industrial Area - Package 03-C299	1. Asphalt Tests	(*)Sampling of Bituminous Mixtures	ASTM D979
				(*)Sampling Compacted Bituminous Mixtures for Laboratory Testing	ASTM D5361
				(*)Preparation of Specimens Using Marshall Apparatus	ASTM D6926
				(*)Bulk Specific Gravity and Density	ASTM D2726
				(*)Maximum Specific Gravity and Density	ASTM D2041
				(*)Thickness of Asphalt Specimen	ASTM D3549
				(*)Marshall Stability and Flow of Bituminous Mixtures	ASTM D6927
				(*)Quantitative Extraction of Bitumen from Bituminous Paving Mixtures	ASTM D2172
				(*)Mechanical Size Analysis of Extracted Aggregate	ASTM D5444
			2. Aggregate Tests	(*)Sampling of Aggregates	ASTM D75
				(*)Reducing Samples to Testing Size	ASTM C702
				(*)Particle Size Distribution	ASTM C136
				(*)Material Finer than 0.075 mm	ASTM C117
				(*)Determination of Specific Gravity and Water Absorption of Fine Aggregate	ASTM C128
				(*)Determination of Specific Gravity and Water Absorption of Coarse Aggregate	ASTM C127

S.NO	Laboratory	Project	Field	Test	Standard
14	Doha technical laboratories	Roads and infrastructure of Doha Industrial Area - Package 03-C299	2.Aggregate Tests	(*)Flat and Elongated Particles	ASTM D4791
			3. Soil Tests	(*)Particle Size Distribution	ASTM D6913
				(*)Materials Finer than No. 200 (0.075mm) Sieve	ASTM D1140
				(*)Liquid Limit, Plastic Limit and Plasticity Index of Soil	ASTM D4318
				(*)Lab Compaction Test using Modified Effort	ASTM D1557
				(*)Correction of Density and Water Content for Soils	ASTM D4718
				(*)Determination of California Bearing Ratio (CBR)	ASTM D1883
				(*)Determination of Moisture Content	ASTM D2216
				(*)Sand Equivalent Value	ASTM D2419
			4. Concrete Tests	(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Slump Test	BS EN 12350 Part 2
				(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Air Content Test for Fresh Concrete by Pressure Method	ASTM C231

S.NO	Laboratory	Project	Field	Test	Standard
15	Element Doha	New Orbital Highway -2 ,Junction 3A	1. Soil Tests	Determination of Moisture Content (Oven Drying)	BS 1377 Part 2: Sec. 3.2
				Particle Size Distribution (Wet Sieving Method)	BS 1377 Part 2: Sec. 9.2
				Particle Size Distribution (Dry Sieving Method)	BS 1377 Part 2: Sec. 9.3
				Dry Density/Moisture Content Relationship	BS 1377 Part 4 :Sec.3.5/3.6
				Determination of Liquid Limit (Cone Penetrometer)	BS 1377 Part 2: Sec. 4.3
				Determination of Liquid Limit (Casagrande method)	BS 1377 Part 2: Sec. 4.5
				Determination of Plastic Limit and Plasticity Index	BS 1377 Part 2: Sec. 5
				In-Situ Density Test (Sand Replacement Method – Large Pouring Cylinder)	BS 1377 Part 9: Sec. 2.2
				Sand Equivalent Value	ASTM D2419
				Determination of California Bearing Ratio (CBR)	BS 1377 Part4: Sec. 7
				Field Density (Nuclear)	ASTM D6938/ BS 1377 Part 9: Sec. 2.5
			2. Aggregate Tests	Sampling of Aggregates (From Heaps)	BS 812 Part 102
				Determination of Moisture Content (Oven Drying)	BS 812 Part 109: Sec.6

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S.NO	Laboratory	Project	Field	Test	Standard
15	Element Doha	New Orbital Highway -2 ,Junction 3A	2.Aggregate Tests	Particle Size Distribution	BS EN 933 Part 1
				Particle Size Distribution	ASTM C136
				Material Finer than 0.075 mm	ASTM C117
				Material Finer than 0.075 mm	BS EN 933 Part 1
				Material Finer than 0.063 mm	BS EN 933 Part 1
				Determination of Specific Gravity and Water Absorption of Fine Aggregate	ASTM C128
				Determination of Specific Gravity and Water Absorption of Coarse Aggregate	ASTM C127
				Determination of Particle Density and Water Absorption	BS EN 1097 Part 6
				Clay Lumps and Friable Particles	ASTM C142
				Los Angeles Abrasion	ASTM C131
				Determination of Shell Content	BS EN 933 Part 7
				Flakiness Index	BS EN 933 Part 3
				Elongation Index	BS EN 933 Part 4

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S.NO	Laboratory	Project	Field	Test	Standard
15	Element Doha	New Orbital Highway -2 ,Junction 3A	2.Aggregate Tests	Determination of Aggregate Crushing Value	BS 812 Part 110
				Determination of Ten Percent Value	BS 812 Part 111
				Determination of Aggregate Impact Value	BS 812 Part 112
			3.Concrete Tests	Shape and Dimensions of Specimen	BS EN 12390 Part 1
				Density of Hardened Concrete	BS EN 12390 Part 7
				Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				Compressive Strength of Concrete Cylindrical Specimens	ASTM C39
				Sampling of Fresh Concrete	BS EN 12350 Part 1/ ASTM C172
				Slump Test	BS EN 12350 Part 2
				Slump Test	ASTM C143
				Test for Temperature of Fresh Concrete	ASTM C1064
				Water Absorption Test	BS 1881 Part 122
				Water Absorption Test	BS EN 12390 Part 8

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S.NO	Laboratory	Project	Field	Test	Standard
15	Element Doha	New Orbital Highway -2 ,Junction 3A	3.Concrete Tests	Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				Making and Curing of Concrete Tests Specimen	ASTM C31
				Capping of Cylindrical Concrete Specimen	ASTM C617
				Resistance to Chloride Ion Penetration	ASTM C1202
				Air Content Test for Fresh Concrete by Pressure Method	ASTM C231

S.NO	Laboratory	Project	Field	Test	Standard
16	ITL	Construction of east industrial road (P017-C2)	1. Concrete Tests	(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Slump Test	BS EN 12350 Part 2
				(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Test for Temperature of Fresh Concrete	ASTM C1064

S.NO	Laboratory	Project	Field	Test	Standard
17	Al Baraha Technical Laboratories	Roads &infrastructure North of Al Nasriya (DN 108-P02)	1. Soil Tests	(*)Reducing Samples to Testing Size	ASTM C702
				(*) Determination of Moisture Content	ASTM D2216
				(*) Particle Size Distribution	ASTM D6913
				(*) Materials Finer than No. 200 (0.075mm) Sieve	ASTM D1140
				(*)Liquid Limit, Plastic Limit and Plasticity Index of Soil	ASTM D4318
				(*)Lab Compaction Test using Modified Effort	ASTM D1557
				(*)Correction of Density and Water Content for Soils	ASTM D4718
				(*)Determination of California Bearing Ratio (CBR)	ASTM D1883
				(*)Sand Equivalent Value	ASTM D2419
			2. Aggregate Tests	(*)Sampling of Aggregates	ASTM D75
				(*)Particle Size Distribution	ASTM C136
				(*)Material Finer than 0.075 mm	ASTM C117
				(*)Determination of Specific Gravity and Water Absorption of Fine Aggregate	ASTM C128
				(*)Determination of Specific Gravity and Water Absorption of Coarse Aggregate	ASTM C127

S.NO	Laboratory	Project	Field	Test	Standard
17	Al Baraha Technical Laboratories	Roads &infrastructure North of Al Nasriya (DN 108-P02)	2.Aggregate Tests	(*) Clay Lumps and Friable Particles	ASTM C142
				(*) Lightweight Particles	ASTM C123
				(*) Flat and Elongated Particles	ASTM D4791
				(*) Sampling of Aggregates (From Heaps)	BS 812 Part 102
				(*)Determination of Moisture Content (Oven Drying)	BS 812 Part 109: Sec.6
				(*)Particle Size Distribution (Wet)	BS 812 Part 103.1-7.2
				(*)Particle Size Distribution (Dry)	BS 812 Part 103.1-7.3
				(*)Determination of Moisture Content (Oven Drying)	BS 812 Part 109: Sec.6
			3. Concrete Tests	(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Slump Test	BS EN 12350 Part 2
				(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Flow Table Test	BS EN 12350 Part 5

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S.NO	Laboratory	Project	Field	Test	Standard
17	Al Baraha Technical Laboratories	Roads &infrastructure North of Al Nasriya (DN 108-P02)	3. Concrete Tests	(*)Sampling of Fresh Concrete	ASTM C172
				(*)Test for Temperature of Fresh Concrete	ASTM C1064
				(*)Slump Test	ASTM C143
				(*)Density Determination for Fresh Concrete	ASTM C138
				(*)Air Content Test for Fresh Concrete by Pressure Method	ASTM C231
			4.Asphalt Tests	(*)Sampling of Bituminous Mixtures	ASTM D979
				(*)Bulk Specific Gravity and Density	ASTM D2726
				(*)Bulk Specific Gravity and Density Using Coated Samples	ASTM D1188
				(*)Maximum Specific Gravity and Density	ASTM D2041
				(*)Thickness of Asphalt Specimen	ASTM D3549
				(*)Sampling Compacted Bituminous Mixtures for Laboratory Testing	ASTM D5361
				(*)Mechanical Size Analysis of Extracted Aggregate	ASTM D5444
				(*)Quantitative Extraction of Bitumen from Bituminous Paving Mixtures	ASTM D2172
				(*)Preparation of Specimens Using Marshall Apparatus	ASTM D6926
				(*)Marshall Stability and Flow of Bituminous Mixtures	ASTM D6927

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S.NO	Laboratory	Project	Field	Test	Standard
18	Qatar engineering laboratories	Construction & upgrade of E ring road north-south link (P008-C2)	1. Soil Tests	(*)Reducing Samples to Testing Size	ASTM C702
				(*)Particle Size Distribution	ASTM D6913
				(*)Materials Finer than No. 200 (0.075mm) Sieve	ASTM D1140
				(*)Liquid Limit, Plastic Limit and Plasticity Index of Soil	ASTM D4318
				(*)Lab Compaction Test using Modified Effort	ASTM D1557
				(*)Determination of California Bearing Ratio (CBR)	ASTM D1883
			2. Aggregate Tests	(*)Sampling of Aggregates	ASTM D75
				(*)Reducing Samples to Testing Size	ASTM C702
				(*)Particle Size Distribution	ASTM C136
				(*)Clay Lumps and Friable Particles	ASTM C142
				(*)Determination of Specific Gravity and Water Absorption of Fine Aggregate	ASTM C128
				(*)Determination of Specific Gravity and Water Absorption of Coarse Aggregate	ASTM C127
				(*)Flat and Elongated Particles	ASTM D4791

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S.NO	Laboratory	Project	Field	Test	Standard
18	Qatar engineering laboratories	Construction & upgrade of E ring road north-south link (P008-C2)	2.Aggregate Tests	(*)Los Angeles Abrasion	ASTM C131
				(*)Los Angeles Abrasion	ASTM C535
				(*)Magnesium Sulphate Soundness	ASTM C88
				(*)Percentage of Fractured Particles	ASTM D5821
				(*)Sand Equivalent Value	ASTM D2419
				(*)Determination of Shell Content	BS EN 933 Part 7
			3. Concrete Tests	(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Slump Test	BS EN 12350 Part 2
				(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Test for Temperature of Fresh Concrete	ASTM C1064

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S.NO	Laboratory	Project	Field	Test	Standard
19	Qatar engineering laboratories	Design & Construction Of Al Bustan Street North (P007-C5 P1)	1. Soil Tests	(*)Sampling of Aggregates	ASTM D75
				(*)Reducing Samples to Testing Size	ASTM C702
				(*)Particle Size Distribution	ASTM D6913
				(*)Materials Finer than No. 200 (0.075mm) Sieve	ASTM D1140
				(*)Liquid Limit, Plastic Limit and Plasticity Index of Soil	ASTM D4318
				(*)Lab Compaction Test using Modified Effort	ASTM D1557
				(*)Determination of Moisture Content	ASTM D2216
			2. Concrete Tests	(*)Sampling of Fresh Concrete	BS EN 12350 Part 1
				(*)Slump Test	BS EN 12350 Part 2
				(*)Making and Curing of Specimen for Strength Test	BS EN 12390 Part 2
				(*)Shape and Dimensions of Specimen	BS EN 12390 Part 1
				(*)Compressive Strength of Concrete Specimens	BS EN 12390 Part 3
				(*)Density of Hardened Concrete	BS EN 12390 Part 7
				(*)Test for Temperature of Fresh Concrete	ASTM C1064

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Lonestar Alpha Laboratories – Oman

Field	*Test Name*	*Test Method*	*Location*
Soil	Moisture Content	BS 1377 Part.2 /ASTM D2216	Muscat – Sahar-Duqm- Salalah
	Atterberg Limits	BS 1377 Part.2	Muscat
	Sieve analysis (Wet)	BS 1377 Part.2	Muscat
	Moisture /density relationship (Proctor Test)	BS 1377 Part 4	Muscat
Concrete	Compressive strength of concrete cube	BS EN 12390-3	Muscat – Sahar-Duqm- Salalah
	Water permeability under pressure	BS EN 12390-8	Muscat
	Rabid chloride permeability	ASTM C1202	Muscat
	Chloride migration	NT BUILD 492	Muscat
Aggregate	Aggregate Impact Value (AIV)	BS 812 Pt: 112	Muscat

Turkish Standards Institution Laboratories (TSE) - Turkey

Testing Field/ Material	Page Number	Testing Field/ Material	Page Number
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Field	*Test Name*	*Test Method*	*Location*
Mechanical tests of metallic materials	Brinell hardness test - Part 1: Test method 60 HBW 2.5/62.5-300 HBW 2.5/62.5 100 HBW 2.5/187.5-400 HBW 2.5/187.5	EN ISO 6506-1 ISO 6506-1	İzmir & Gebze
	Rockwell hardness test - Part 1: Test method 20 HRB-100 HRB 20 HRC-70 HRC 20 HRA-88 HRA 20 HRC-70 HRC 70 HR15N-94 HR15N 20 HR45N-77 HR45N 67 HR15T-93 HR15T 10 HR45T-72 HR45T	EN ISO 6508-1 ISO 6508-1	İzmir & Gebze
	Tensile testing - Part 1: Method of test at room temperature	EN ISO 6892-1 ISO 6892-1 ASTM A615	İzmir, Kayseri & Gebze
	Vickers hardness test - Part 1: Test method 150HV30-840 HV30 200 HV50-900 HV50 HV1,HV10 & HV30	EN ISO 6507-1 ISO 6507-1	İzmir & Gebze
	Charpy Impact Test (V- Notch) 300 J	EN ISO 148-1 ISO 148-1	Gebze

Field	*Test Name*	*Test Method*	*Location*
fire tests for construction material	Ignitability of products subjected to direct impingement of flame - Part 2: Single flame source test	EN ISO 11925-2 ISO 11925-2	İzmir & Tuzla
	fire tests for building products exposed to the thermal attack by a single burning item	EN 13823	İzmir & Tuzla
	Reaction to fire tests for products – Non combustibility test	EN ISO 1182 ISO 1182	İzmir & Tuzla
	Determination of the gross heat of combustion (calorific value)	EN ISO 1716 ISO 1716	İzmir & Tuzla
	Reaction to fire tests for floorings - Part 1: Determination of the burning behavior using a radiant heat source	EN ISO 9239-1 ISO 9239-1	İzmir & Tuzla
	Reaction to fire tests -spread of flame -part 2: lateral spread on building and transport products in vertical configuration	ISO 5658-2	Tuzla
	Determination of Smoke Toxicity in The Test Chamber Using FTIR Spectroscopy	EN ISO 5659-2 ISO 5659-2	Tuzla
	Reaction-to-fire tests -- Heat release, smoke production and mass loss rate -- Part 1: Heat release rate (cone calorimeter method) and smoke production rate (dynamic measurement)	ISO 5660-1	Tuzla
	Plastics -- Determination of Burning Behavior by Oxygen Index -- Part 2: Ambient Temperature Test	EN ISO 4589-2/A1 ISO 4589-2/A1	Tuzla

Field	*Test Name*	*Test Method*	*Location*
fire tests for construction material	Thermal insulating materials for building applications -Determination of organic content	EN 13820	İzmir & Tuzla
	Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests	EN 13501-1	İzmir & Tuzla
	Fire classification of construction products and building elements -- Part 5:Classification using data from external fire exposure to roof tests	EN 13501-5	İzmir & Tuzla
	Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures "d"	EN 60079-1 IEC 60079-1	İzmir
	Non-electrical Equipment for Use in Potentially Explosive Atmospheres - Part 3: Protection by Flameproof Enclosure "d "	EN 13463-3	İzmir
	Plasterboards and ceiling elements with thin laminations, fibrous gypsum boards, fibrous gypsum plaster casts, and composite panels (laminates), in which the incorporated material is placed on a face susceptible to be exposed to fire, including relevant ancillary products (in walls, partitions or ceilings (or lining thereof) subject to reaction to fire requirements).	EN 13658-1:2005 EN 13658-2:2005 EN 13815:2006 EN 13915:2007 EN 13950:2014 EN 13950:2005 EN 13963:2005 EN 13963:2005/AC:2006 EN 14190:2014 EN 14190:2005 EN 14209:2005 EN 14496:2005 EN 15283-1:2008+A1:2009 EN 15283-2:2008+A1:2009	İzmir & Tuzla

Field	*Test Name*	*Test Method*	*Location*
fire tests for construction material	Gypsum products (2/4): - Plasterboards, blocks, ceiling elements and gypsum plasters, fibrous gypsum plasters casts, including relevant ancillary products (in walls, partitions or ceilings, as relevant, intended for fire protection of structural elements and/or fire compartmentation in buildings).	EN 12859:2011 EN 12860:2001/AC:2002 EN 13279-1:2008 EN 520:2004+A1:2009	İzmir, Kayseri & Tuzla
	Curtain walling (1/1): - Curtain wall kits (as external walls not subject to reaction to fire requirements).	EN 13830:2015 EN 13830:2003	İzmir & Tuzla
	Wood-based panels (2/2): - Unfaced, overlaid and veneered or coated wood-based panels (for nonstructural elements in internal or external applications).	EN 13986:2004+A1:2015	İzmir & Tuzla
	Masonry and related products (3/3) : - Masonry units incorporating thermal insulating materials placed on a face susceptible to be exposed to fire (in walls and partitions subject to reaction to fire regulations).	EN 15824:2009	İzmir & Tuzla
	Roof coverings, rooflights, roof windows and ancillary products (2/6)& (3/6) : - Factory-bonded composite or sandwich panels (for uses subject to reaction to fire regulations &for uses subject to external fire performance regulations).	EN 14509:2013	İzmir, Kayseri & Tuzla

Field	*Test Name*	*Test Method*	*Location*
fire tests for construction material	Roof coverings, rooflights, roof windows and ancillary products (2/6): - Flat and profiled sheets (for uses subject to reaction to fire regulations).	EN 14782:2006 EN 14783:2013 EN 534:2006+A1:2010	İzmir & Tuzla
	Roof coverings, rooflights, roof windows and ancillary products (2/6)&(3/6) : - Roofing tiles, slates, stones and shingles (for uses subject to reaction to fire regulations &for uses subject to external fire performance regulations).	EN 12326-1:2014 EN 1304:2005 EN 490:2011 EN 492:2012 EN 494:2012 EN 494:2012+A1:2015 EN 544:2011	İzmir & Tuzla
	Roof coverings, rooflights, roof windows and ancillary products (2/6) &(3/6) : - Roof windows (for uses subject to reaction to fire regulations &for uses subject to external fire Performance regulations).	EN 14351-1:2006+A1:2010	İzmir , Kayseri & Tuzla
	Roof coverings, rooflights, roof windows and ancillary products (2/6) &(3/6): - Rooflights (for uses subject to reaction to fire regulations &for uses subject to external fire performance regulations).	EN 14963:2006 EN 1873:2014+A1:2016 EN 1873:2005	İzmir & Tuzla
	Internal and external wall and ceiling finishes (3/5): - Cladding slabs (as external finishes in walls or ceilings subject to reaction to fire regulations).	EN 1469:2015 EN 1469:2004	İzmir & Tuzla

Field	*Test Name*	*Test Method*	*Location*
fire tests for construction material	Internal and external wall and ceiling finishes (3/5):- Shingles (as external finishes in walls or ceilings subject to reaction to fire regulations).	EN 12467:2012	İzmir & Tuzla
	Internal and external wall and ceiling finishes (3/5):- Suspended ceilings (kits) (as internal or external finishes in ceilings subject to reaction to fire regulations).	EN 13964:2014 EN 13964:2004/A1:2006 EN 13964:2004	İzmir & Tuzla
	Internal and external wall and ceiling finishes (3/5):- Coverings in roll form (as internal finishes in walls or ceilings subject to reaction to fire regulations)	EN 14716:2004	İzmir & Tuzla
	Internal and external wall and ceiling finishes (3/5): - Sidings (as internal or external finishes in walls or ceilings subject to reaction to fire regulations).	EN 13245-2:2008 EN 13245-2:2008/AC:2009 EN 14915:2013 EN 534:2006+A1:2010	İzmir & Tuzla
	Internal and external wall and ceiling finishes (3/5) : - Panels (as internal or external finishes in walls or ceilings subject to reaction to fire regulations)	EN 438-7:2005 EN 15102:2007+A1:2011 EN 1013:2012+A1:2014 EN 14509:2013	İzmir , Kayseri & Tuzla
	Membranes (2/3)&(3/3) : - Roof sheets (for uses subject to reaction to fire regulations &for uses subject to external fire performance regulations).	EN 13707:2013 EN 13707:2004+A2:2009 EN 13956:2012	İzmir & Tuzla

Field	*Test Name*	*Test Method*	*Location*
fire tests for construction material	Membranes (2/3) : - Damp proofing sheets (For uses subject to reaction to fire regulations).	EN 13967:2012 EN 13969:2004 EN 13969:2004/A1:2006	İzmir & Tuzla
	Membranes (2/3): - Water vapor control layers (for uses subject to reaction to fire regulations).	EN 13859-1:2010 EN 13859-2:2010 EN 13970:2004 EN 13970:2004/A1:2006 EN 13984:2013	İzmir & Tuzla
	Membranes (2/3): - Damp proof courses (for uses subject to reaction to fire regulations).	EN 14909:2012 EN 14967:2006	İzmir & Tuzla
	Thermal insulating products (2/2) : - Thermal Insulating products (factory-made products and products intended to be formed in-situ)-(for uses subject to regulations on reaction to fire).	EN 13162:2012+A1:2015 EN 13163:2012+A1:2015 EN 13164:2012+A1:2015 EN 13165:2012+A1:2015 EN 13166:2012+A1:2015 EN 13167:2012+A1:2015 EN 13168:2012+A1:2015 EN 13169:2012+A1:2015 EN 13170:2012+A1:2015 EN 13171:2012+A1:2015 EN 14064-1:2010 EN 14303:2009+A1:2013 EN 14304:2009+A1:2013 EN 14305:2009+A1:2013	İzmir & Tuzla

Field	*Test Name*	*Test Method*	*Location*
fire tests for construction material	Thermal insulating products (2/2) : - Thermal Insulating products (factory-made products and products intended to be formed in-situ)-(for uses subject to regulations on reaction to fire).	EN 14306:2009+A1:2013 EN 14307:2009+A1:2013 EN 14308:2009+A1:2013 EN 14309:2009+A1:2013 EN 14313:2009+A1:2013 EN 14313:2015 EN 14314:2009+A1:2013 EN 14315-1:2013 EN 14315-2:2013 EN 14933:2007 EN 14934:2007	İzmir & Tuzla
	Products related to concrete, mortar and grout (2/2): - Concrete protection and repair products (for uses subject to reaction to fire regulations).	EN 1504-2:2004 EN 1504-3:2005 EN 1504-4:2004 EN 1504-6:2006	İzmir & Tuzla
	Construction adhesives (2/2) : - Adhesives for tiles (for uses subject to reaction to fire regulations)	EN 12004:2007+A1:2012 EN 12004-1:2017	İzmir , Corum & Tuzla
	Space heating appliances (2/2):- Space heating appliances without internal energy source (for uses subject to reaction to fire regulations).	EN 442-1:2014	İzmir
	Pipes, tanks and ancillaries not in contact with water intended for human consumption (4/5) :- Tanks (in installations in areas subject to reaction to fire regulations, used for the transport/disposal/storage of water not intended for human consumption)	EN 13341:2005+A1:2011 EN 295-1:2013 EN 295-4:2013 EN 295-5:2013 EN 295-7:2013 EN 15069:2008	İzmir & Tuzla

Field	*Test Name*	*Test Method*	*Location*
fire tests for construction material	Flat glass, profiled glass and glass-block products (2/6) :- Insulating glass units (for uses subject to reaction to fire regulations)	EN 1279-5:2005+A2:2010	İzmir Kayseri, & Tuzla
	Flat glass, profiled glass and glass-block Products (2/6) & (3/6):- Flat or curved glass panels (for uses subject to reaction to fire regulations &for uses subject to external fire performance regulations).	EN 1096-4:2004 EN 12150-2:2004 EN 12337-2:2004 EN 13024-2:2004 EN 14178-2:2004 EN 14449:2005 EN 14449:2005/AC:2005 EN 1748-1-2:2004 EN 1748-2-2:2004 EN 1863-2:2004 EN 572-9:2004 EN 1036-2:2008	İzmir & Tuzla
	Flat glass, profiled glass and glass-block Products (3/6):- Insulating glass units (for uses subject to external fire performance regulations).	EN 1279-5:2005+A2:2010	İzmir , Kayseri & Tuzla
	Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services	EN 13501-2+A1	Tuzla & Kayseri
	Fire resistance- tests- part 1: general requirements	EN 1363-1	Tuzla & Kayseri
	Fire resistance tests- part 2: alternative and additional procedures	EN 1363-2	Tuzla

Field	*Test Name*	*Test Method*	*Location*
fire tests for construction material	Fire-resistance tests -- elements of building construction -- part 1: general requirements	ISO 834-1	Tuzla
	Fire resistance tests for non- loadbearing elements: walls , ceilings, curtain walling - full configuration (complete assembly)& curtain walling – part configuration	EN 1364-1 EN 1364-2 EN 1364-3 EN 1364-4	Tuzla & Kayseri
	Fire resistance tests for loadbearing elements : walls, floors and roofs, beams & columns	EN 1365-1 EN 1365-2 EN 1365-3 EN 1365-4	Tuzla
	Fire resistance tests for service installations: linear joint seals	EN 1366-4	Tuzla
	Test methods for determining the contribution to the fire resistance of structural members: horizontal protective membrane	EN 13381-1	Tuzla
	Test methods for determining the contribution to the fire resistance of structural members: vertical protective membranes	EN 13381-2	Tuzla
	Test methods for determining the contribution to the fire resistance of structural members: applied protection to concrete members	EN 13381-3	Tuzla
	Test methods for determining the contribution to the fire resistance of structural members: applied passive protection to steel members	EN 13381-4	Tuzla

Field	***Test Name***	***Test Method***	***Location***
fire tests for construction material	fire resistance test for door and shutter assemblies and openable windows	EN 1634-1	Tuzla & Kayseri
	fire resistance characterization test for elements of building hardware	EN 1634-2	Tuzla
	smoke control test for door and shutter assemblies	EN 1634-3/AC	Tuzla
	Secure storage units - classification and methods of test for resistance to fire – light fire storage units	EN 15659	Tuzla
	landing doors fire resistance test	EN 81-58	Tuzla & Kayseri
	Fire tests on building materials and structures for Non-Loadbearing Construction Products	BS 476-22	Tuzla
	Fire resistance tests for service installations: raised access floors and hollow floors	EN 1366-6	Tuzla
	Fire resistance tests for service installations: penetration seals	EN 1366-3	Tuzla
	Test methods for determining the contribution to the fire resistance of structural members: applied reactive protection to steel members	EN 13381-8	Tuzla
	Methods for determination of the fire resistance of loadbearing elements of construction	BS 476-21	Tuzla
	Method for determination of the fire resistance of elements of construction (general principles)	BS 476-20	Tuzla
	Methods for determination of the fire resistance of loadbearing elements of construction	BS 476-21	Tuzla
	Fire resistance test for unprotected electric cables (P classification)	EN 50577	Tuzla
	Manholes and inspection chambers (For all use(s) when subject to regulations on reaction to fire)	EN 295-6:2013	Tuzla

Field	*Test Name*	*Test Method*	*Location*
Chemical analysis of cement	Determination of Loss On Ignition	EN 196-2	Ankara
	Determination of Chloride	EN 196-2	Ankara
	Determination of Residue Insoluble in HCl and Na_2CO_3	EN 196-2	Ankara
	Gravimetric Determination of Sulphate	EN 196-2	Ankara
	Pozzolanicity Test	EN 196-5	Ankara
	Determination of the water-soluble chromium (VI) content of cement	EN 196-10	Ankara
Cement tests	Determination of strength	EN 196-1	Ankara
	Setting time	EN 196-3+A1	Ankara
	Soundness	EN 196-3+A1	Ankara
Aggregate tests	Particle Size Distribution	EN 933- 1	Ankara
	Flakiness Index	EN 933- 3	Ankara
	Elongation (Shape) Index	EN 933- 4	Ankara
	Determination of percentage of crushed and broken surfaces in coarse aggregate particles	EN 933-5	Ankara
	Assessment of surface characteristics - Flow coefficient of aggregates	EN 933-6	Ankara
	Determination of shell content - Percentage of shells in coarse aggregates	EN 933-7	Ankara
	Assessment of fines - Methylene blue test	EN 933-9+A1	Ankara
	Determination of the resistance to ware (Micro- Deval)	EN 1097-1	Ankara

Field	*Test Name*	*Test Method*	*Location*
Aggregate tests	Methods for the determination of resistance to fragmentation-Los Angeles	EN 1097-2	Ankara
	Determination of loose bulk density and voids	EN 1097-3	Ankara
	Determination of particle density and water absorption	EN 1097-6	Ankara
	Determination of the polished stone value (Resistance of coarse aggregates to polishing)	EN 1097-8	Ankara
	Determination of the polished stone value (Aggregate abrasion value -AAV)	EN 1097-8	Ankara
	Determination of the affinity between aggregate and bitumen	EN 12697-11	Ankara
	Determination of resistance to freezing and thawing	EN 1367-1	Ankara
	Tests for thermal and weathering properties of aggregates- Part 2: Magnesium sulfate test	EN 1367-2	Ankara
	Volume Stability - Drying Shrinkage	EN 1367-4	Ankara
	Tests for thermal and weathering properties of aggregates: Determination of resistance to thermal shock	EN 1367-5	Ankara
	Particle length	EN 13450	Ankara
	Alkali Reactivity Mortar-Bar Method	ASTM C 1260	Ankara
	Determination of potential presence of humus	EN 1744-1+A1	Ankara
Concrete tests	Compressive strength of concrete test specimens	EN 12390-3	Ankara, Corum & Gebze
	Determination of density of hardened concrete	EN 12390-7	Ankara& Corum
	Determination of Tensile Splitting Strength	EN 12390-6	Ankara& Corum

Field	*Test Name*	*Test Method*	*Location*
Terrazzo tiles tests for internal and external use	Dimensional deviations	EN 13748-1 EN 13748-2	Ankara
	Straightness of edges of the upper face	EN 13748-1 EN 13748-2	Ankara
	Breaking strength and Breaking load	EN 13748-1 EN 13748-2	Ankara
	Flatness of the upper face	EN 13748-1 EN 13748-2	Ankara
	Water absorption	EN 13748-1 EN 13748-2	Ankara
	Abrasion resistance(Bohme test method)	EN 13748-1 EN 13748-2	Ankara
	Slip resistance	EN 13748-1 EN 13748-2	Ankara
Masonry and concrete paving product tests	Thickness of facing layer of Concrete kerb units	EN 1340	Ankara
	Bending strength of Concrete kerb units	EN 1340	Ankara
	Abrasion according to the Bohme test of Concrete kerb units	EN 1340	Ankara
	Slip/skid resistance of Concrete kerb units	EN 1340	Ankara
	Due to weather the effects of wear resistance (water absorption) of Concrete kerb units	EN 1340	Ankara
	Due to weather the effects of wear resistance (freeze thaw) of Concrete kerb units	EN 1340	Ankara
	Thickness of facing layer of Concrete paving blocks	EN 1338	Ankara

Field	*Test Name*	*Test Method*	*Location*
Masonry and concrete paving product tests	Abrasion according to the Bohme test of Concrete paving blocks	EN 1338	Ankara
	Slip/skid resistance of Concrete paving blocks	EN 1338	Ankara
	Due to weather the effects of wear resistance (water absorption) of Concrete paving blocks	EN 1338	Ankara
	Due to weather the effects of wear resistance (freeze thaw) of Concrete paving blocks	EN 1338	Ankara
	Tensile splitting strength of Concrete paving blocks	EN 1338	Ankara
	Shape and Dimensions of Concrete paving blocks	EN 1339	Ankara
	Thickness of surface layer of Concrete paving blocks	EN 1339	Ankara
	Flexural strength of Concrete paving blocks	EN 1339	Ankara
	The breaking load of Concrete paving blocks	EN 1339	Ankara
	Abrasion resistance (Bohme Method)	EN 1339	Ankara
	Due to weather the effects of wear resistance (Free Thaw) of Concrete paving blocks	EN 1339	Ankara
	Abrasion resistance of Concrete paving blocks (With Large Disk) of Concrete paving blocks	EN 1339	Ankara
	Slip/Skid Resistance of Concrete paving blocks	EN 1339	Ankara
	Due to weather the effects of wear resistance (Water absorption) of Concrete paving blocks	EN 1339	Ankara
	Determination of compressive strength	EN 772-1	Manisa
Slabs of natural stone for external paving	Determination of the slip resistance	EN 1341	Ankara
	Shape and dimensions	EN 1341	Ankara

Field	*Test Name*	*Test Method*	*Location*
Slabs of natural stone for external paving	Measurement of abrasion resistance	EN 1341	Ankara
Sets of natural stone for external paving	Determination of the slip resistance	EN 1342	Ankara
	Shape and dimensions	EN 1342	Ankara
	Measurement of abrasion resistance	EN 1342	Ankara
Kerbs of natural stone for external paving	Shape and dimensions	EN 1343	Ankara
Natural Stones & Natural Stones products	Determination of abrasion resistance	EN 14157	Ankara
	Determination of compressive strength	EN 1926	Ankara
	Determination of water absorption coefficient by capillarity	EN 1925	Ankara
	Böhme Abrasion Test	EN 14157	Ankara
	Determination of the slip resistance	EN 14231	Ankara
	Determination of breaking load at dowel hole	EN 13364	Ankara
	Determination of resistance to ageing by thermal shock	EN 14066	Ankara
	Determination of real density and apparent density, and of total and open porosity (except real density)	EN 1936	Ankara
	Determination of water vapour transmission properties	EN ISO 12572	Ankara

Field	*Test Name*	*Test Method*	*Location*
Natural Stones & Natural Stones products	Shape and dimensions of Natural stone products: - Modular tiles - Slabs for floors and stairs	EN 13373	Ankara
	Determination of frost resistance of Natural stone Products: -Kerbs of natural stone for external paving -Slabs of natural stone for external paving - Modular tiles -Slabs for floors and stairs	EN 12371	Ankara
	Flexural strength	EN 12372	Ankara
	Water absorption at atmospheric pressure	EN 13755	Ankara
Wood-based panels	Determination of moisture content	EN 322	Ankara & Gebze
	Determination of density	EN 323	Ankara & Gebze
	Determination of dimensions of boards: Determination of thickness, width and length	EN 324-1	Ankara & Gebze
	Wood-Based panels- Determination of dimensions of boards: Determination of squareness and edge straightness	EN 324-2	Ankara
	Determination of modulus of elasticity in bending and of bending strength	EN 310	Ankara & Gebze
	Surface soundness	EN 311	Ankara & Gebze
	Determination of dimensions of test pieces	EN 325	Ankara
	Sampling, cutting and inspection : Sampling test pieces and expression of test results	EN 326-1	Ankara

Field	*Test Name*	*Test Method*	*Location*
Laminates products	Resistance to surface wear	EN 438-2	Ankara
	Resistance to abrasion (flooring grade laminates)	EN 438-2	Ankara
	Substrate protection against water vapour	EN 438-2	Ankara
	Resistance to water vapour	EN 438-2	Ankara
	Resistance to dry heat	EN 438-2	Ankara
	Resistance to scratching	EN 438-2	Ankara
	Resistance to staining	EN 438-2	Ankara
Adhesives for tiles & ceramic	Determination of tensile adhesion strength for cementitious adhesives	EN 1348 EN 12004-2	Ankara, Corum & Gebze
	Determination of open time	EN 1346 EN 12004-2	Ankara, Corum & Gebze
	Determination of shear adhesion strength of dispersion adhesives	EN 1324 EN 12004-2	Ankara
	Determination of shear adhesion strength of reaction resin adhesives	EN 12003 EN 12004-2	Ankara
	Determination of slip	EN 1308 EN 12004-2	Gebze & Corum
	Determination of tensile adhesion strength for cementitious Adhesives	EN 12004-2	Gebze & Corum
	Determination of transverse deformation for cementitious adhesives	EN 12004-2	Gebze & Corum
Screed materials	Determination of flexural and compressive strength	EN 13892-2	Ankara

Field	*Test Name*	*Test Method*	*Location*
Grout For Tiles	Determination Of Resistance To Abrasion	EN 12808-2	Ankara
	Determination of flexural and compressive strength / Flexural and compressive strength after freeze-thaw	EN 12808-3	Ankara
	Determination Of Shrinkage	EN 12808-4	Ankara
	Determination of water absorption	EN 12808-5	Ankara
	Determination of transverse deformation for cementitious adhesives and grouts	EN 12002	Gebze & Corum
Mortar for masonry and plaster	Determination of flexural and compressive strength of hardened mortar	EN 1015-11	Ankara & Tuzla
	Determination of dry bulk density of hardened mortar	EN 1015-10	Tuzla
	Determination of adhesive strength of hardened rendering and plastering mortars on substrates	EN 1015-12	Tuzla
	Determination of water absorption coefficient due to capillary action of hardened mortar	EN 1015-18	Tuzla
	Determination of water vapor permeability of hardened rendering and plastering mortars	EN 1015-19	Tuzla
NDT -Metal and non-metal materials	NDT (Visual Testing - VT) - Welding Seams -Welding Joints of Pressure Equipment -Pipes -Casting -Forging -Railway applications	ISO 17635 ISO 5817 EN 1370 EN 13018 EN 13981-1 EN 13674-1	Gebze

Field	*Test Name*	*Test Method*	*Location*
NDT -Metal and non-metal materials	NDT (Ultrasonic Testing - UT) -Welding Joints -Welding Seams -Welding Joints of Pressure Equipment -Pipes -Casting -Forging -Railway applications	EN ISO 17640 EN ISO 17635 ISO 17635 EN ISO 11666 EN 10228-3 EN 12680-1 EN 10160 EN ISO 5817 ISO 5817 ISO 5948 EN 13261 EN 13262 EN 13981-4 EN 13981-2 EN 13674-1	Gebze
	NDT (Radiographic Testing - RT) -Welding Joints -Welding Seams -Welding Joints of Pressure Equipment -Pipes -Casting -Forging -Railway applications	ISO 17636-1 ISO 17636-1 ISO 17635 ISO 17635 EN 12681 ISO 5579 ISO 5817 ISO 10675-1 EN 13981-3 ISO 10042	Gebze

Field	*Test Name*	*Test Method*	*Location*
NDT -Metal and non-metal materials	Digital Radiography for metallic material	ISO 17636-2 ISO 17636-2 EN 14784-2 ISO 10675-2	Gebze
	NDT (Magnetic Particle Testing - MT) -Ferromagnetic materials -Welding Seams -Welding Joints of Pressure Equipment -Pipes -Casting -Forging -Railway applications	EN ISO 9934-1 ISO 9934-1 EN ISO 17635 ISO 17635 EN ISO 17638 ISO 17638 EN ISO 23278 ISO 23278 EN 1369 EN 10228-1 EN ISO 5817 ISO 5817 EN 13261 ISO 6933 EN 14200	Gebze

Field	*Test Name*	*Test Method*	*Location*
NDT -Metal and non-metal materials	NDT (Liquid Penetrant Testing - PT) -Welding Seams -Welding Joints of Pressure Equipment -Pipes -Casting -Forging -Railway applications	EN ISO 3452-1 ISO 3452-1 EN ISO 17635 ISO 17635 EN 10228-2 EN 1371-1 EN 1371-2 EN ISO 23277 ISO 23277 EN ISO 5817 ISO 5817 TS EN 13981-4 EN 13981-4	Gebze
	NDT (Eddy Current Testing - ET) -Welding Seams -Welding Joints of Pressure Equipment -Steel Pipes and Tubes	EN ISO 15549 EN ISO 17643 ISO 17643 EN ISO 5817 ISO 5817 EN ISO 17635	Gebze
	Macrostructure Inspection pf metallic materials	EN ISO 17639 ISO 17639	Gebze

Field	*Test Name*	*Test Method*	*Location*
Acoustics tests for insulation & Sound Absorbing Materials	Field measurement of sound insulation in buildings and of building elements: Airborne sound insulation	EN ISO 16283-1 ISO 16283-1	Gebze
	Field measurement of sound insulation in buildings and of building elements: Impact sound insulation	EN ISO 16283-2 ISO 16283-2	Gebze
	Laboratory measurement of sound insulation of building elements: Application rules for specific	EN ISO 10140-1 ISO 10140-1	Tuzla
	laboratory measurement of sound insulation of building elements : measurement of airborne sound insulation	EN ISO 10140-2 ISO 10140-2	Tuzla & Kayseri
	rating of sound insulation in buildings and of building elements : airborne sound insulation	EN ISO 717-1 ISO 717-1	Tuzla & Kayseri
	Laboratory measurement of sound insulation of Building elements : measurement of impact sound insulation	EN ISO 10140-3 ISO 10140-3	Tuzla
	rating of sound insulation in buildings and of building elements : impact sound insulation	EN ISO 717-2 ISO 717-2	Tuzla
	measurement of sound absorption in a reverberation room	EN ISO 354 ISO 354	Tuzla
	sound absorbers for use in buildings-rating of sound absorption	EN ISO 11654 ISO 11654	Tuzla
	determination of sound absorption coefficient and impedance in impedance tubes : transfer- function method	EN ISO 11654 ISO 11654	Tuzla

Field	*Test Name*	*Test Method*	*Location*
Ceramic tiles	Determination of water absorption apparent porosity, apparent relative density and bulk density	EN ISO 10545-3 ISO 10545-3	Manisa
	Determination of modulus of rupture and breaking strength	EN ISO 10545-4 ISO 10545-4	Manisa
Thermal insulation products tests	Determination Of Length And Width	EN 822	Tuzla
	Determination Of Thickness	EN 823	Tuzla
	Determination Of Squareness	EN 824	Tuzla
	Determination Of Flatness	EN 825	Tuzla
	Determination Of Compression Behavior	EN 826	Tuzla
	Determination Of Apparent Density	EN 1602	Tuzla
	Determination Of Dimensional Stability Under Constant Normal Laboratory Conditions (23 °C / 50 % Relative Humidity)	EN 1603	Tuzla
	Determination Of Dimensional Stability Under Specified Temperature And Humidity Conditions	EN 1604	Tuzla
	Determination Of Deformation Under Specified Compressive Load And Temperature Conditions	EN 1605	Tuzla
	Determination Of Tensile Strength Perpendicular To Faces	EN 1607	Tuzla
	Determination Of Short Term Water Absorption By Partial Immersion	EN 1609	Tuzla
	Determination of water vapour transmission properties	EN 12086	Tuzla

Field	Test Name	Test Method	Location
Thermal insulation products tests	Determination Of Long Term Water Absorption By İmmersion	EN 12087	Tuzla
	Determination Of Bending Behavior	EN 12089	Tuzla
	Determination Of The Behavior Under Point Load	EN 12430	Tuzla
	Determination Of Thermal Resistance By Means Of Guarded Hot Plate And Heat Flow Meter Methods for	EN 12667	Tuzla & Corum
	Determination Of Thermal Resistance By Means Of Guarded Hot Plate And Heat Flow Meter Methods for Dry And Moist Products Of Medium And Low Thermal Resistance	EN 12664	Tuzla & Corum
	Determination Of Thermal Resistance By Means Of Guarded Hot Plate And Heat Flow Meter Methods for Thick Products Of High And Medium Thermal Resistance	EN 12939	Tuzla
	Thermal insulation - Determination of steady-state thermal transmission properties - Calibrated and guarded hot box for Curtain walling, Doors and Windows	EN ISO 8990 ISO 8990	Tuzla , Manisa & Kayseri
	Determination of thermal transmittance by the hot-box method - Complete windows and doors	EN ISO 12567-1 ISO 12567-1	Tuzla
	Thermal performance of windows and doors Determination of thermal transmittance by hot box method - Part 2: Roof windows and other projecting windows	EN ISO 12567-2 ISO 12567-2	Tuzla
	Thermal insulation - Determination of steady-state thermal transmission properties of thermal insulation for circular pipes	EN ISO 8497 ISO 8497	Tuzla

Field	*Test Name*	*Test Method*	*Location*
Thermal insulation products tests	Determination of dimensions, squareness and linearity of preformed pipe insulation	EN 13467	Tuzla
	Determination of water vapor transmission properties of preformed pipe insulation	EN 13469	Tuzla
	Determination of the apparent density of preformed pipe insulation	EN 13470	Tuzla
	Determination of short term water absorption by partial immersion of preformed pipe insulation	EN 13472	Tuzla
	Determination Of The Tensile Bond Strength Of The Adhesive And Of The Base Coat To The Thermal İnsulation Material	EN 13494	Tuzla
	Determination Of The Mechanical Properties Of Glass Fiber Meshes As Reinforcement For External Thermal	EN 13496	Tuzla
	Determination Of The Resistance To İmpact Of External Thermal İnsulation Composite Systems	EN 13497	Tuzla
	Determination Of The Resistance To Penetration Of External Thermal İnsulation Composite Systems	EN 13498	Tuzla
	Thermal performance of windows, doors and shutters -Calculation of thermal transmittance : Simplified method	EN ISO 10077-1	Kayseri
	Thermal performance of windows, doors and shutters - Calculation of thermal transmittance: Numerical method for frames	EN ISO 10077-2	Kayseri

Field	*Test Name*	*Test Method*	*Location*
chemical analysis of metallic materials	Optical Emission Spectrometer (OES) Spectral Analyze Test of Low and Carbon Alloy Steels (Excluding steel wires): Carbon (C), Silicon (Si), Manganese (Mn),Phosphorous (P), Sulfur (S), Chromium (Cr),Molybdenum (Mo), Nickel (Ni), Aluminum(Al), Copper (Cu) elements	ASTM E415 ASTM A615	Gebze
	Optical Emission Spectrometer (OES) Spectral Analyze Test of Stainless Steel (Excluding steel wires):Carbon (C), Silicon (Si), Manganese (Mn), Phosphorous (P), Sulfur (S), Chromium (Cr), Molybdenum (Mo), Nickel (Ni), Aluminum(Al), Copper (Cu) elements	ASTM E1086	Gebze
Plastics, Thermoplastic Pipes ,Fittings and Plastic Pipe Systems	Determination of Mass Flow Rate (MFR)	EN ISO 1133-1 ISO 1133-1	Gebze
	Longitudinal Reversion - Test Method and Parameters	EN ISO 2505 ISO 2505	Gebze
	Determination of Ring Stiffness (Max d= 1600 mm)	EN ISO 9969 ISO 9969	Gebze
	Determination of Tensile Properties (Max=10 kN)	EN ISO 527-1 EN ISO 527-2 ISO 527-1 ISO 527-2 EN ISO 6259-1 EN ISO 6259-3 ISO 6259-1	Gebze
	Determination of Tensile Stress-Strain Properties	ISO 37	Gebze

Field	*Test Name*	*Test Method*	*Location*
Plastics, Thermoplastic Pipes ,Fittings and Plastic Pipe Systems	Determination of Glass Transition Temperature	EN ISO 11357-1 EN ISO 11357-2 ISO 11357-1 ISO 11357-2	Gebze
	Determination of Temperature and Enthalpy of Melting and Crystallization	EN ISO 11357-1 EN ISO 11357-3 ISO 11357-1 ISO 11357-3	Gebze
	Determination of Oxidation Induction Time (OIT)	EN ISO 11357-1 EN ISO 11357-6 ISO 11357-1 EN 728	Gebze
	Determination of the Resistance to Internal Pressure (Max d=630 mm)	EN ISO 1167-1 EN ISO 1167-2 ISO 1167-1 ISO 1167-2	Gebze
	Determination of Vicat Softening Temperature (VST)	EN ISO 306 ISO 306 ISO 2507-1	Gebze
	Determination of Density	EN ISO 1183-1 ISO 1183-1	Gebze
	Determination of Carbon Black Content with Calcination and Pyrolysis	ASTM D 4218	Gebze
Paints and Varnishes	Determination of Paint Thickness Magnetic Eddy Method	EN ISO 2808 ISO 2808	Gebze & Kayseri
	Determination of Density Pyknometer method	EN ISO 2811-1 ISO 2811-1	Gebze

Field	*Test Name*	*Test Method*	*Location*
Paints and Varnishes	Resistance to Liquid Soaps and Detergents Immersion Method	EN ISO 2812-1 ISO 2812-1	Gebze
	Resistance to Mineral Oils Immersion Method	EN ISO 2812-1 ISO 2812-1	Gebze
	Determination of non-volatile-matter content	EN ISO 3251 ISO 3251	Gebze
	Determination of Resistance to Alkaline and Acid Immersion Method	EN ISO 2812-1 ISO 2812-1	Gebze
	Determination of Specular Gloos of Non-metallic Paint Films at 20°, 60° and 85°	EN ISO 2813 ISO 2813	Gebze
	Determination of wet-scrub resistance and clean ability of coatings	EN ISO 11998 ISO 11998	Gebze
	Determination of hiding power Determination of contrast ratio (opacity) of light-colored paints at a fixed spreading rate	EN ISO 6504-3 ISO 6504-3	Gebze
	Determination of Water-vapor Transmission Properties	EN ISO 7783 ISO 7783	Gebze & Tuzla
	Determination Of Liquid Water Permeability Coating Materials and Coating Systems for Exterior Masonry and Concrete	EN 1062-3	Gebze & Tuzla
	Film Thickness Calculation Method	EN 1062-1	Gebze
	Determination of fineness of grind	EN ISO 1524 ISO 1524	Gebze
	Measurement of bond strength by pull-off of Products and systems for the protection and repair of concrete structures	EN 1542	Tuzla

Field	*Test Name*	*Test Method*	*Location*
Paints and Varnishes	Evaluation Of Degradation Of Coatings; Designation Of Quantity And Size Of Defects, And Of İntensity Of Uniform Changes İn Appearance: Assessment Of Degree Of Blistering	EN ISO 4628-2 ISO 4628-2	Tuzla
	Evaluation Of Degradation Of Coatings; Designation Of Quantity And Size Of Defects, And Of İntensity Of Uniform Changes İn Appearance: Assessment Of Degree Of Cracking	EN ISO 4628-4 ISO 4628-4	Tuzla
	Evaluation Of Degradation Of Coatings; Designation Of Quantity And Size Of Defects, And Of İntensity Of Uniform Changes İn Appearance: Assessment Of Degree Of Flaking	EN ISO 4628-5 ISO 4628-5	Tuzla
Glass products for building uses	Generalities, dimensional tolerances and rules for the system description	EN 1279-1	Kayseri
	Long term test method and requirements for moisture penetration (Applicable for only desiccant in bulk) for Insulating glass units	EN 1279-2	Kayseri
	Determination of Moisture vapor transmission rate & Adhesion	EN 1279-4	Kayseri
	Fogging test & Moisture penetration index	EN 1279-6	Kayseri
	Testing and classification resistance against manual attack	EN 356	Kayseri
	Energy conservation and heat retention -Radiation properties: Light transmittance and reflectance	EN 410	Kayseri

Field	*Test Name*	*Test Method*	*Location*
Glass products for building uses	Energy conservation and heat retention - Radiation properties: Solar energy characteristics	EN 410	Kayseri
	Determination of thermal transmittance (U value) - Calculation method	EN 673	Kayseri
	Pendulum test - Impact test method and classification for flat glass	EN 12600	Kayseri
	Glazing and airborne sound insulation	EN 12758 ISO 10140-2 (ISO 140-3)	Kayseri
	Mechanical strength & Fragmentation test for Thermally toughened soda lime silicate safety glass	EN 12150-1 EN 14179-1 EN 1863-1	Kayseri
	Mechanical strength & Fragmentation test for Thermally toughened borosilicate safety glass	EN 13024-1	Kayseri
	Mechanical strength & Fragmentation test for Thermally toughened alkaline earth silicate safety glass	EN 14321-1	Kayseri
	Four point bending strength test	EN 1288-3	Kayseri
	Air permeability test and classification for Windows and Doors	EN 1026 EN 12207	Kayseri
	Resistance to wind load test and classification for Windows and Doors	EN 12211 EN 12210	Kayseri
	Water tightness test and classification for Windows and Doors	EN 1027 EN 12208	Kayseri

Field	*Test Name*	*Test Method*	*Location*
Glass products for building uses	Resistance to repeated opening and closing test and classification for Windows and Doors	EN1191 EN 12400 EN 13115 EN 12217	Kayseri
	Thermal performance of windows and doors: Determination of thermal transmittance by the hot-box method: Complete windows and doors	EN ISO 12567-1 ISO 12567-1	Kayseri
	Operating forces test and classification of Windows	EN 12046-1 EN 13115	Kayseri
	Determination of the resistance to racking of Windows	EN 14608	Kayseri
	Determination of the resistance to static Torsion of Windows	EN 14609	Kayseri
	Soft and heavy body impact test, safety requirements and classification of Windows	EN 13049	Kayseri
	Thermal performance of windows and doors Determination of thermal transmittance by hot box method : Roof windows and other projecting windows	EN ISO 12567-2 ISO 12567-2	Kayseri
	Operating forces test and classification of doors	EN 12046-2 EN 12217	Kayseri
	Determination of the resistance to vertical load test and classification of Hinged and Pivoted Doors	EN 947 EN 1192 EN 13115	Kayseri

Field	*Test Name*	*Test Method*	*Location*
Glass products for building uses	Determination of the resistance to static torsion test and classification of Hinged and Pivoted Doors	EN 948 EN 1192 EN 13115	Kayseri
	Determination of the resistance to soft and heavy body impact for doors test and classification of Windows and Curtain Walling Doors, Blinds and Shutters	EN 949 EN 1192	Kayseri

Field	*Test Name*	*Test Method*	*Location*
Chemical analysis of Soil	Determination of pH Pretreatment: Pretreatment of samples for physico-chemical analysis Measurement: Electrometric Method	TS ISO 10390 ISO 10390	Gebze
	Determination of Oil And Gres Soxhlet Extraction Method	SM 5520E	Gebze
	Pretreatment: Microwave Digestion Analysis: ICP-MS Method: Determination of Arsenic (As), Barium (Ba),Cobalt (Co), Chrome (Cr), Copper (Cu),Cadmium (Cd), Molybdenum (Mo), Nickel (Ni), Lead (Pb), Antimony (Sb), Selenium (Se), Mercury (Hg), Thallium (Tl), Tin (Sn),Silver (Ag), Boron (B), Beryllium (Be),Titanium (Ti), Zinc (Zn), Vanadium (V),Uranium (U)	EN ISO 17294-1 EN ISO 17294-2 ISO 17294-1 ISO 17294-2 EPA 3051A EPA 6020A	Gebze
	BTEX (Benzene, Toluene, Ethyl benzene, Xylene) GC-MS Headspace Method	EPA 5021 EPA 8260	Gebze
	Determination of Total Petroleum Hydrocarbons GC-FID Method	EN 14039	Gebze
	Determination of Absorbable Organic Halogens (AOX) / Determination of Total Organic Halogens (TOX) Pretreatment: Sample Preparation Analysis: Microcoulumetric Method	EN 16179 EN 16166	Gebze

Field	*Test Name*	*Test Method*	*Location*
Chemical analysis of Soil	Determination of Volatile Organic Compounds: GC-MS Headspace Method : (1,1-Dichloroethene;Dichloromethane; trans-1,2 -Dicholoroethene;1,1-Dichloroethane; cis-1,2 -Dicholoroethene; 2,2-Dichloropropane; Bromochloromethane; Tricholoromethane (Chloroform); 1.1.1Trichloroethane; 1,1 -Dichloropropene; Tetrachloromethane; Benzene; 1,2-Dicholoroethane;Trichloroethene; 1,2-Dichloropropane;Dibromomethane;Bromodichloromethane;Toluene; 1,1,2-Trichlorethane;Tetrachloroethene; 1,3-Dichloropropane;Chlorodibromomethane; 1,2-Dibromoethane; Monochlorobenzene;1,1,1,2-Tetrachloroethane; Ethyl benzene; m/p-Xylene; o-Xylene; Styrene; Bromoform; Cumene (Isopropylbenzene);Bromobenzene; 1,2,3 Trichloropropane;n-Propylbenzene; 2-Chlorotoluene; 4-Chlorotoluene; 1,3,5-Trimethylbenzene; tert-Butylbenzene; 1,2,4-Trimethylbenzene; sec-Butylbenzene; 1,3-Dichlorobenzene; 1,4 -Dichlorobenzene; p-isopropyl toluene; 1,2 -Dichlorobenzene; n-Butylbenzene; 1,2 -Dibromo-3-Chloropropane; 1,2,4-Trichlorobenzene; Naphthalene;Hexachloro-1,3-Butadiene; 1,2,3 -Trichlorobenzene)	EPA 5021 EPA 8260	Gebze

Field	*Test Name*	*Test Method*	*Location*
Microbiological test for drinking water	Enumeration of Culturable Microorganisms (22°C and 36°C)	EN ISO 6222	Gebze
	Detection and Enumeration of Intestinal Enterococci Membrane Filtration Technique	EN ISO 7899-2 ISO 7899-2	Gebze
	Detection and Enumeration of Pseudomonas aeruginosa Membrane Filtration Technique	EN ISO 16266	Gebze
	Enumeration of E. Coli and Coliform Membrane Filtration Technique	EN ISO 9308-1	Gebze
chemical analysis of drinking water	ICP-MS Method Determination of: Aluminum (Al), Boron (B), Barium (Ba), Calcium (Ca), Cadmium (Cd), Chromium (Cr), Copper (Cu), Iron (Fe), Mercury (Hg), Potassium (K), Magnesium (Mg), Manganese (Mn), Sodium Na), Nickel (Ni), Phosphorus (P), Lead (Pb), Antimony (Sb), Selenium (Se)	EN ISO 17294-2	Gebze
	Determination of Fluoride, Chloride, Nitrite/Nitrite Nitrogen , Nitrate Nitrate Nitrogen, Phosphate/Phosphate Phosphors Bromide and sulfate Ion Chromatography Method	ISO 10304-1 EN ISO 10304-	Gebze
	Determination of dissolved cations (Li+, Na+, NH4, Mn2+, Ca2+, Mg2+) Ion Chromatography Method	EN ISO 14911 ISO 14911	Gebze

Approved Laboratories Contact Details

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4	شركة الخليج للمختبرات (Gulf Lab)	44607034	44607628	4024	gulflabs@mannai.com.qa
5	المختبرات التقنية (Tech Lab)	44603251	44600952	5652	info@techlabqatar.com
6	قطر للمختبرات الهندسية (QEL)	44515401	44515317	40278	qel@qel.com.qa
7	مختبرات بيونير (Pioneer)	4469 0362	44514407	41028	hsqaqc@pioneerlaboratory.com
8	مختبرات التيسير (Teyseer Labs)	44621254	44568977	1556	lab@teyseergroup.com
9	مختبرات الدوحة الفنية (DTL)	44607508	44607552	40462	info@dtl.com.qa
10	شركة فوجرو وشبه الجزيرة للخدمات (Fugro)	44601075	44601076	47167	n.gopinath@fugro.com.
11	قطر للبيئية وهندسة التربة (QGEC)	44501473	44501573	22054	main@qgec.net
12	مختبرات البراحة الفنية (BATLABS)	44501701	44509326	8294	info@bat-labs.com
13	مختبرات الجزيرة والمعامل الهندسية لضبط الجودة (JEL)	44604941	44604934	300	aljazeeralabs@gmail.com
14	المختبر الفني العالمي (ITL)	44554309	44554310	37986	info@itl-qatar.com
15	مختبرات قطر الصناعية (QIL)	44601580	44601739	10451	qil@qilqatar.com
16	مجموعة مختبرات كونستركشن تكنولوجي (CTL)	40370130	-	706	info@ctlgroupqatar.com

2. Calibration laboratories:

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2	مركز البدر لخدمة الأجهزة والمقاييس النووية (BNGESC)	Doha-Qatar	44607508	44607552	40570	bng@badergroupqatar.com
3	العاجل لخدمات المعايرة PROMPET	Doha-Qatar	44115771	44418969	24067	prompt@promptqatar.com

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3. Abroad laboratories

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1	مختبرات لونستار الفا عمان Lonestar alpha laboratories - Oman	Muscat	00968-24501524	-	1197	patilby@lonestaralpha.com moncy.thomas@lonestaralpha.com
		Sahar	00968-26751755	-	84	
		Salala	00698-23213390	-	1887	
		Duqm	00698-99278040	-	1197	
2	مختبرات المواصفات التركية Turkish Standards Institution Laboratories (TSE)	Ankara	0 312 416 62 00	0 312 416 66 11	-	dlmb@tse.org.tr
		Izmir	0 232 376 24 25	0 232 386 33 98	-	egebolgelab@tse.org.tr
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		Corum	90 364 254 90 41	90 364 254 94 04	-	corumlab@tse.org.tr
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