

# Schedule

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Certificate No. : LA-2008-0422-B

Issue No. : 10

Date : 31 August 2015

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FIELD OF TESTING : Civil Engineering Testing

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
<b>A. AGGREGATE</b>	1. Petrographic Examination Of Aggregates For Concrete	BS EN 932-3: 1997 BS 7943: 1999 BS 812 Part 104: 1994 ASTM C295/C295M: 2012	LJP,SW, ZR
	2. Potential Alkali Reactivity (Mortar Bar Method)	ASTM C1260: 2014	LJP,SW,JUL, ZR
	3. Particle Size Distribution / Sieve Analysis	SS 73: 1974 ASTM C136/C136M: 2014 BS 812 Part 103.1: 1985 BS EN 933-1: 2012	LJP,SW,JUL A3 to A32
	4. Fineness Modulus	ASTM C136/C136M: 2014	
	5. Clay, Silt And Dust (Decantation Method)	SS 73: 1974 (Except Method A) BS 812 Part 103.1: 1985 ASTM C117: 2013 BS EN 933-1: 2012	
	6. Moisture Content (Oven Dried Method)	SS 73: 1974 BS 812 Part 109: 1990 BS EN 1097-5 : 2008	
	7. Bulk Density	BS EN 1097- 3: 1998 BS 812 Part 2: 1995 SS 73: 1974	

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	8. Relative Density & Water Absorption	BS EN 1097 – 6: 2013 BS 812 Part 2: 1995 SS 73: 1974 ASTM C127: 2015 ASTM C128: 2015 (Gravimetric Method)	
	9. Sampling	BS 812 Part 102: 1989 SS 73: 1974 BS EN 932-1: 1997	
	10. Organic Impurities	ASTM C40 / C40M: 2011 SS 73: 1974	
	11. Shell Content	SS 73 Part 6: 1992 BS 812 Part 106: 1985 BS EN 933-7: 1998	
	12. Flakiness Index	SS 73: Part 5.1: 1992 BS EN 933-3: 2012 BS 812 Part 105.1: 1989	
	13. Elongation Index	SS 73: 1974 BS 812 Part 105.2: 1990	
	14. Impact Value	SS 73: 1974 BS 812 Part 112: 1990	
	15. Crushing Value	SS 73: 1974 BS 812 Part 110: 1990	
	16. 10% Fines Value	SS 73: 1974 BS 812 Part 111: 1990	
	17. Los Angeles Abrasion	SS 73: 1974 ASTM C131/C131M: 2014 BS EN 1097-2: 2010 ASTM C535: 2012	

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	18. Soundness Test	ASTM C88 : 2013 BS 812 Part 121: 1989 BS EN 1367-2: 2009 SS 73 Part 21: 1992	
	19. Shape & Surface Texture	SS 73 : 1974	
	20. Drying Shrinkage	SS 73 Part 20: 1992 BS EN 1367-4: 2008 BS 812 Part 120: 1995	
	21. Assessment of Fines - Methylene Blue Test	BS EN 933-9:2009+A1:2013	
	22. Shape Index	BS EN 933-4: 2008	
	23. Angularity Number	SS 73: 1974	
	24. Assessment of Fines – Sand Equivalent Test	BS EN 933-8: 2012 ASTM D2419: 2014	
	25. Constituents Of Coarse Recycled Aggregates	BS EN 933-11: 2009 SS 544: Part 2: 2009 Annex B	
	26. Organic Contaminators By Mortar Method	BS EN 1744-1: 2009 + A1: 2012, Clause 15.3	
	27. Coral Content (Shell Content In Fine Aggregate)	SANS 5840: 2008	
	28. Aggregate Abrasion Value	BS 812-113: 1990 BS EN 1097-8:2009, Annex A	
	29. Influence of recycled aggregate extract on the initial setting time of cement	BS 1744-6 : 2006	

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<b>B. SOIL</b>	30. Percentage of fractured particles in coarse aggregate	ASTM D5821: 2013	LJP, SW, JUL B1 to B12
	31. Flat particles, elongated particles, or flat and elongated particles in coarse aggregate	ASTM D4791: 2010	
	32. Clay Lumps and Friable Particles In Aggregates	ASTM C142/C142M: 2010	
	1. Direct Shear Box Test	BS 1377 Part 7: 1990 (Clause 4.5.4)	
	2. Compaction Test (Maximum And Minimum Dry Density	BS 1377 Part 4: 1990 (clause 4)	
	3. Compaction Test (Dry Density /Moisture Content)	BS 1377 Part 4: 1990 (Clause 3)	
	4. Moisture Content	BS 1377-2: 1990	
	5. Unconfined Compressive Strength	BS 1377 Part 7: 1990 (Section 7) ASTM D2166/D2166M: 2013	
	6. Liquid Limit	BS 1377-2: 1990, Method 4.3 ASTM D4318: 2010e1	
	7. Plastic Limit & Plasticity Index	BS 1377-2: 1990, Section 5 ASTM D4318: 2010e1	
8. Linear Shrinkage	BS 1377-2: 1990, Section 6.5		
9. Particle Size Distribution	BS 1377-2: 1990, Method 9.2, 9.3 & 9.5		
10. California Bearing Ratio	BS 1377-4: 1990, Method 7		

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	11. Particle Density	BS 1377-2: 1990, Section 8	
	12. Percentage Of Fines (Finer Than 75 Micron)	ASTM D1140-2014	
	13. Sand Replacement	BS 1377-9: 1990, Method 2.1	LJP, DAV
	14. In-Place Density & Water Content (NDG)	ASTM D6938: 2010 ASTM D2922: 2005 ASTM D3017: 2005 BS 1377-9: 1990 Clause 2.5	LJP, DAV
	15. Plate Loading Test	BS 1377-9: 1990 Method 4.1	LJP, DAV
<b>C. CONCRETE</b>			
1 Fresh Concrete	1. Slump Test	SS 78: Pt A2: 1987 BS 1881: Pt 102: 1983 BS EN 12350-2: 2009	LJP, SW, JUL C1 to C12
	2. Density (Fresh Concrete)	SS 78: Pt A7: 1987 BS 1881: Pt 107: 1983 BS EN 12350-6: 2009	
	3. Sampling	BS EN 12350-1: 2009 SS 78 Part A1: 1987 BS 1881: Pt 101: 1983	
	4. Air Content-Pressure Methods	BS EN 12350-7: 2009 SS 78 Part A6: 1987 BS 1881: Pt 106: 1983	
	5. Flow Table Test	SS 78 : Pt A5: 1987 BS 1881: Pt 105: 1984 BS EN 12350-5: 2009	
	6. Degree of Compactibility	BS EN 12350-4: 2009	

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2 Hardened Concrete (Physical Tests)	7. Laboratory Mixing And Sampling	SS 78: Pt 25: 1987 BS 1881: Pt 125: 2013 BS EN 480-1:2014	LJP, SW, ZR  LJP, SW, JUL C2 to C18
	8. Time of Setting of Concrete Mixtures by Penetration Resistance	ASTM C403 / C403M: 2008	
	9. Slump-flow test	BS EN 12350-8: 2010	
	10. V-funnel test	BS EN 12350-9: 2010	
	11. L box test	BS EN 12350-10: 2010	
	12. Sieve segregation test	BS EN 12350-11: 2010	
	13. J-ring test	BS EN 12350-12: 2010	
	1. Petrographic Examination Of Hardened Concrete	ASTM C856 : 2014	
	2. Density (Hardened Concrete)	SS 78 : Pt A14 : 1987 BS 1881 : Pt 114 : 1983 BS EN 12390-7 : 2009	
	3. Compressive Strength Of Cubes	SS 78 : Pt A16 : 1987 BS 1881 : Pt 116 : 1983 BS EN 12390-3 : 2009	
	4. Water Absorption	SS 78 : Pt A22 : 1987 BS 1881 : Pt 122 : 2011 ASTM C642 : 2013	
	5. Water Permeability	DIN 1048: Pt 5 – 1991	
	6. Depth Of Penetration Of Water Under Pressure	BS EN 12390-8: 2009	

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	7. Making Test Beams	SS 78 Part A9: 1987 BS 1881: Pt 109: 1983 BS EN 12390-1: 2012 BS EN 12390-2: 2009	
	8. Making Test Cylinders	SS 78 Part A10: 1987 BS 1881: Pt 110: 1983 BS EN 12390-1: 2012 BS EN 12390-2: 2009	
	9. Tensile Splitting Strength Of Test Specimens	SS 78 Part A17: 1987 BS 1881: Pt 117: 1983 BS EN 12390-6: 2009	
	10. Making Of Test Cubes	SS 78 Part A8: 1987 BS 1881 : Pt 108: 1983 BS EN 12390-1: 2012 BS EN 12390-2: 2009	
	11. Flexural Strength	SS 78 Part A18: 1987 BS 1881: Pt 118: 1983 BS EN 12390-5: 2009	
	12. Compressive Strength Of Cores	SS 78 Part A20: 1987 BS 1881: Pt 120: 1983 BS EN 12504-1: 2009	
	13. Static Modulus Of Elasticity In Compression	BS 1881: Pt 121: 1983 ASTM C469 / C469M: 2010	
	14. Initial Surface Water Absorption	BS 1881: Pt 208: 1996	
	15. Length Change (Drying Shrinkage & Wetting Expansion)	ASTM C157/157M: 08(2014)e1	

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3 Hardened Concrete (Non-Destructive Tests)	15. Concrete's ability to resist chloride ion penetration (Rapid Chloride Permeability Test)	ASTM C1202: 2012	LJP, SW, DAV C1 to C8
	16. Coefficient of Permeability	Darcy's Theory – HDB Test Method ADM/CE/017: 2013	
	17. Water Penetration & Water Gain	HDB Test Method (1 April 1992)ADM/CE/018: 2014	
	1. Determination Of Rebound Number Of Hardened Concrete	ASTM C805 / C805M: 2013 BS EN 12504-2: 2012	
	2. Ultrasonic Pulse Velocity Measurement	ASTM C597: 2009 BS EN 12504-4: 2004	
	3. Covermeter Test	BS 1881: Pt 204: 1988	
	4. Strain Measurement (Electrical Displacement)	BS 1881: Pt 206: 1986	
	5. Initial Surface Absorption	BS 1881: Pt 208: 1996	
	6. Half-Cell Potential Measurement	ASTM C876: 2009	
	7. Depth Of Carbonation, Cores Or Broken (On Concrete)	BS EN 14630: 2006 BRE Publication (IP6/81) RILEM TC14-CPC 1988	
8. Penetration Resistance	ASTM C803/C803M: 2003 (2010)		



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<b>D. REPAIR MATERIAL</b>			
<b>1</b> Non-Shrink Grout (For Pressure Grouting)	1. Flow Consistency 2. Compressive Strength 3. Expansion / Shrinkage 4. Bleeding 5. Setting time (initial & final set)	ASTM C939: 2010 ASTM C942: 2010 ASTM C940: 2010a ASTM C940: 2010a ASTM C953: 2010	LJP, SW, JUL TBK
<b>2</b> Non-Shrink Grout (For Semi-Precast Construction)	1. Flow Consistency 2. Compressive Strength 3. Change in Height 4. Setting Time 5. Bond Strength at 28 Days	BS 4551-1: 1998 ASTM C1437: 2013 BS EN 196-1: 2005 ASTM C109 / 109M: 2013 ASTM C827/C827M: 2010 BS EN 196-3:2005 + A1:2008 BS 6319: Part 4: 1984 BS EN 12615: 1999	LJP, SW, JUL TBK
<b>3</b> Polymer Modified Cement Mortar	1. 1Compressive Strength 2. Stiffening Time 3. Shrinkage at 28 days 4. Tensile pull off strength (before and after weathering)	ASTM C109/C109M: 2013 BS EN 12190: 1999 ASTM C349: 2014 BS EN 1015-9: 1999 ASTM C531: 2000 (2012) BS EN 1015-12: 2000 ADM/CE/010: 2010 ADM/CE/011: 2010	LJP,SW,JUL
<b>4</b> Bonding Agent	1. Slant Shear Bond Strength (Type I)	ASTM C1042: 1999	LJP,SW,JUL

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5 Waterproofing Material (External Wall Seepage Repair)	2. Slant Shear Bond Strength (Type II)	ASTM C1042: 1999	LJP, SW, JUL,
	3. Total Solids Content	ISO 124: 2014	
	1. Tensile pull off strength	ASTM D4541: 2002 (Method A, Type 1 Tester) ASTM D7234: 2012	
	2. Water Vapour Transmission	ASTM E96 / E96M: 2014 ASTM D1653: 2013	
6 Flexible Cementitious Waterproof Membrane (Water-Based)	3. Tensile Strength & Elongation at Break	ASTM D412: 2006a (2013) Method A only	LJP, SW, JUL
	4. Crack Bridging	ASTM C836/C836M: 2012 ADM /CE/001: 2010 AS/NZS 4548.5: 1999	
	1. Tensile pull off strength	ASTM D4541: 2002 (Method A, Type 1 Tester) ASTM D7234: 2012	
	2. Tensile Strength & Elongation at Break	ASTM D412: 2006a(2013) Method A	
	3. Crack Bridging	ASTM C836/C836M: 2012 ADM/CE/002: 2010	
	4. Water Penetration Test	DIN 1048: Pt 5-1991 ADM/CE/003: 2010	
	5. Initial Hardness (Shore A)	ASTM D2240 – 2005 (2010)	
	6. Set to touch	ASTM D1640 / D1640M: 2014	

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7 Flexible Non-Cementitious Waterproof Membrane (Water-Based)	1. Tensile pull off strength	ASTM D4541: 2002 (Method A, Type 1 Tester) ASTM D7234: 2012	LJP,SW,JUL
	2. Tensile Strength & Elongation at Break	ASTM D412: 2006a (2013) Method A	
	3. Crack Bridging	ASTM C836/C836M: 2012 ADM/CE/002: 2012	
	4. Water Penetration Test	DIN 1048: Pt 5-1991 ADM/CE/004: 2010	
	5. Initial Hardness (Shore A)	ASTM D2240: 2005 (2010)	
	6. Set to touch	ASTM D1640 / D1640M: 2014	
8 Waterproofing Membrane for RC Roof – Bituminous Type	1. Tensile pull off strength	ASTM D4541: 2002 (Method A, Type 1 Tester) ASTM D7234: 2012	LJP,SW,JUL
	2. Tensile Strength & Elongation at Break	ASTM D412 : 2006a(2013) Method A	
	3. Crack Bridging	ASTM C836 / C836M: 2012 ADM/CE/002: 2012	
	4. Water Vapour Transmission	ASTM E96 / E96M: 2014	
	5. Water Penetration Test	DIN 1048: Pt 5 -1991 ADM/CE/005: 2010	
	6. Initial Hardness (Shore A)	ASTM D2240: 2005 (2010)	
	7. Accelerated Weathering	ASTM G154: 2012a ADM/CE/007: 2012	
	8. Set to touch	ASTM D1640 / D1640M: 2014	

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9 Repair Material - Reinforcement Primer / Reinforcement Bar	9. Solid Content	SS 133: 1987 Appendix D	LJP,SW,JUL
	1. Half-Cell Potential	ASTM C876: 2009	
	2. Bond Performance	SS 2 Part 3: 1987 Appendix A	
10 Epoxy Mortar	1. Working Time, Initial Setting Time and Service Strength Setting time	ASTM C308: 2000 (2012)e1	
	2. Compressive Strength	ASTM C579: 2001 (2012)	
	3. Coefficient of Linear Thermal Expansion	ASTM C531: 2000 (2012)	
	4. Water Absorption	ASTM C413: 2001 (2012)	
	5. Tensile Strength	ASTM C307: 2003 (2012)	
	6. Flexural Strength	ASTM C580: 2002 (2012)	
11 Epoxy Resin for Injection	1. Determination of Bond Strength	) ASTM C882/C882M:2013a ) SS 5: Pt B7: 2013 ) ASTM D1475: 2013	
	2. Density	)	
12 Bituminous and Non-Bituminous Pre-formed Waterproofing Membrane for Concealed Roof	1. Dimensional stability	) SS 374: 1994	LJP,SW,JUL,
	2. Tensile strength and elongation at break	) ) )	
	3. Tensile shear at joints	) )	
	4. Pliability	)	

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<b>E. BUILDING MATERIAL</b>	5. Water absorption and soluble matter	)	
	6. Water Vapour Transmission	)	
	7. Hydrostatic test	)	
	8. Resistance to leakage at joint	)	
<b>1 Tile Adhesive (Fast and Normal Set)</b>	1. Tensile adhesion bond strength	BS EN 1348: 2007	LJP, SW, JUL TBK E1 to E6
	2. Tensile adhesion bond strength (after water immersion)	BS EN 1348: 2007	
	3. Tensile adhesion bond strength (after heat aging)	BS EN 1348: 2007	
	4. Open Time	BS EN 1346: 2007	
	5. Deformity	BS EN 12002: 2008	
	6. Slip	BS EN 1308: 2007	
	7. Pull Out Test (Site Test)	ADM/CE/015: 2011	
<b>2 Tile Grout</b>	1. Shrinkage	BS EN 12808-4: 2009	LJP, SW, JUL TBK
	2. Water Absorption	BS EN 12808-5: 2008	
	3. Compressive Strength	BS EN 12808-3: 2008	
	4. Flexural Strength	BS EN 12808-3: 2008	
	5. Abrasion Resistance	BS EN 12808-2: 2008	

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<b>3</b> Prepacked Floor Screed / Waterproof Screed	1. Average compressive strength	ASTM C109/109M: 2013	LJP,SW,JUL
	2. Flow	ASTM C1437: 2013	
	3. Water Absorption	ASTM C413: 2001 (2012)	
	4. Water Penetration Test	DIN 1048 Pt 5: 1991 ADM/CE/003: 2010	
	5. Flexural Strength	ASTM C348: 2014	
	6. Water Retentivity	BS 4551: 2005 + A2: 2013	
	7. Stiffening time	BS EN 1015-9: 1999 (Method A)	
	8. Volume change	ASTM C827/C827M: 2010	
<b>4</b> Prepacked Plaster / Prepacked Mortar	1. Tensile pull off strength	BS EN 1015-12: 2000	LJP,SW,JUL
	2. Compressive Strength	BS EN 1015-11: 1999 BS 4551-1: 1998	
	3. Consistence Retentivity	BS 4551 : 2005 + A2 : 2013	
	4. Water Retentivity	BS 4551 : 2005 + A2 : 2013	
	5. Stiffening time	BS EN 1015-9: 1999 (Method A)	
	6. Linear Shrinkage	ASTM C531: 2000 (2012)	
	7. Pull Out Test (site test)	ADM/CE/016: 2011	
<b>5</b> Prepacked Skim Coat	1. Tensile pull off strength	BS EN 1015-12: 2000	LJP, SW, JUL
	2. Tensile pull off strength (after weathering)	BS EN 1015-12: 2000 ADM/CE/008: 2010	

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6 Acrylic Polymer Cementitious Coating	3. Compressive Strength	BS EN 1015-11: 1999	LJP, DAV  LJP, SW, JUL
	4. Water Retentivity	BS 4551: 2005 + A2: 2013	
	5. Setting Time	BS EN 196-3:2005 + A1:2008	
	6. Linear Shrinkage	ASTM C531: 2000 (2012)	
	7. Pull out test (site test)	ADM/CE/016: 2011	
	1. Compressive Strength	ASTM C109 / C109M: 2013	
	2. Flexural Strength	ASTM C348: 2014	
7 Self-Leveling Screed	3. Tensile Strength	ASTM C307: 2003 (2012)	LJP, SW, JUL
	4. UV Accelerated Weathering	ASTM G154: 2012a ADM/CE/009: 2012	
	5. Skid Resistance	ASTM E303 : 1993 (2013)	
	6. Taber Abrasion	ASTM D4060: 2014 ADM/CE/012: 2015	
	7. Shear Bond Adhesive	ASTM C482: 2002 (2014) ADM/CE/013 : 2010	
	8. Water Penetration Test	DIN 1048: Pt 5-1991 ADM/CE/006: 2010	
	1. Compressive Strength	ASTM C109/C109M: 2013	
	2. Linear shrinkage / Length Change	ASTM C157/C157M - 08(2014)e1 ASTM C531: 2000 (2012)	
3. Slip Resistance (before & after accelerated weathering)	BS 7976-2: 2002 + A1: 2013		

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8 Sealant	4. Tensile adhesion bond strength	ASTM D4541: 2002 (Method A, Type I Tester) BS EN 13892-8: 2002	LJP, SW, JUL
	5. Shear adhesion bond strength	ASTM C482: 2002 (2014)	
	6. Accelerated weathering (UV Exposure)	ASTM G154: 2012a	
	7. Flowability	ASTM C939: 2010	
	8. Water Absorption	ASM C413: 2001 (2012) (Method A)	
	1. Staining and colour change	ASTM C510: 2005a (2011)	
	2. Extrusion rate	ASTM C1183/C1183M:2013	
	3. Rheological (flow) properties	ASTM C639: 2001 (2011)	
F. PAINT / COATING	4. Indentation hardness	ASTM C661: 2006 (2011)	LJP, SW, JUL, DAV
	5. Tack-free time	ASTM C679: 2003 (2009)e1	
	6. Adhesion and cohesion under cyclic movement (Hockman cycle)	ASTM C719: 2014	
	7. Effects of heat aging	ASTM C1246: 2000 (2012)	
	8. Effects of laboratory accelerated weathering	ASTM C793: 2005 (2010)	
	9. Adhesion-in-Peel	ASTM C794: 2014	
	1. Adhesion (Pull Off) strength	ASTM D4541: 2002 (Method A, Type I Tester) ASTM D7234: 2012	



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<b>G. ADMIXTURES</b>	2. Non-destructive measurement of dry film thickness of non-magnetic coatings applied to a ferrous base	ASTM D7091: 2013 BS EN ISO 2178: 1995	LJP, DAV
	3. Dry film thickness	ISO 2808:2007 (Method 7c & 7d) ASTM D7091: 2013	LJP, DAV
	1. Water Reduction	BS EN 12350-2: 2009 BS EN 480-1: 2014 SS EN 934-2: 2008	LJP, SW, JUL G1 to G9
	2. Compressive Strength	BS EN 12390-3: 2009 BS EN 480-1: 2014 SS EN 934-2: 2008	
	3. Air content – Pressure methods	BS EN 12350-7: 2009 BS EN 480-1: 2014 SS EN 934-2: 2008	
	4. Increase in Consistence	BS EN 12350-2: 2009 BS EN 480-1: 2014 SS EN 934-2: 2008	
	5. Retention of Consistence	BS EN 12350-2: 2009 BS EN 480-1: 2014 SS EN 934-2: 2008	
	6. Bleeding	BS EN 480-4: 2005 BS EN 480-1: 2014 SS EN 934-2: 2008	
	7. Setting Time	BS EN 480-2: 2006 BS EN 480-1: 2014 SS EN 934-2: 2008	

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<b>H. CEMENT</b> <ul style="list-style-type: none"> <li>• Ordinary Portland Cement/ Sulphate-Resisting and Portland Blast Furnace Slag Cement</li> <li>• Ground Granulated Blast Furnace Slag, Silica Fume &amp; Fly Ash</li> </ul>	8. Capillary Absorption	BS EN 480-5: 2005 BS EN 480-1: 2014 SS EN 934-2: 2008	LJP, SW, JUL H1 to H13
	9. Sampling	BS EN 934-6: 2001 SS EN 934-6: 2008 (SS 320: 1987)	
	1. Determination of strength	BS EN 196-1: 2005 ASTM C109 / C109M: 2013 SS 397 Part 1: 1997	
	2. Determination of setting time	BS EN 196-3:2005 + A1:2008 SS 397 Part 3: 1997	
	3. Determination of soundness	BS EN 196-3:2005 + A1:2008 SS 397 Part 3: 1997	
	4. Determination of Fineness	BS EN 196-6: 2010 SS 397 Part 6: 1997	
	5. Moisture Content	BS EN 15167: Pt 1: 2006 Annex A SS EN 15167: Pt 1: 2008 Annex A	
	6. Activity Index	BS EN 196-1: 2005 BS EN 15167-1:2006, 5.3.2.3 BS EN 13263-1:2005 + A1: 2009, 5.3.3 BS EN 450-1: 2012, 5.3.2	

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<ul style="list-style-type: none"> <li>Masonry Cement</li> </ul>	7. Setting Time	BS EN 196-3: 2005 + A1: 2008		
	8. Soundness	BS EN 196-3: 2005 + A1: 2008		
	9. Compressive strength	BS EN 196-1: 2005		
	10. Consistence of fresh mortar	BS EN 413-2: 2005		
	11. Air Content	BS EN 413-2: 2005		
	12. Water Retentivity	BS EN 413-2: 2005		
	13. Sieve Residue	BS EN 196-6: 2010		
<b>I. CURING COMPOUND</b>	1. Water retention	ASTM C156: 2011	LJP, SW, JUL,	
	2. Bond strength test	ASTM C882 / C882M: 2013a Clause 11.3 only ADM/CE/019: 2014		
	3. Density test	ASTM D1475: 2013		
	4. Non volatile matter test	ASTM D1644: 2001 (2012)		
<b>J. MASONRY UNITS</b>	<ul style="list-style-type: none"> <li>Ferrocement Roof Slabs / Sunbreaker Slabs</li> </ul>	1. Dimension and density	LJP, SW, JUL, DAV J1 to J4	
		2. Cover measurement		BS 1881: Pt 204: 1988
		3. Initial surface absorption		BS 1881: Pt 208: 1996
		4. Carbonation depth		BRE Publication (IP6/81) BS EN 14630: 2006

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	9. Determination of water absorption	(SS 483: 2000) ISO 13006: 2012 (BS EN 14411: 2012) ISO 10545-3: 1995	
	10. Determination of scratch hardness of surface	EN 101: 1991 BS 6431 Part 13: 1986 EN 159: 1991 SS 301: 1985 Appendix G	
	11. Slip resistance test	(SS 483: 2000) ISO 13006: 2012 SS 485: 2011 (BS EN 14411: 2012)	
	12. Reverse staining	ADM/CE/014: 2011	
	13. Stain resistance	(SS 483: 2000) ISO 13006: 2012 (BS EN 14411: 2012) SS 57: 1989 Appendix H.7	
	14. Chemical resistance	(SS 483: 2000) ISO 13006: 2012 (BS EN 14411: 2012) ISO 10545-13: 1995	
	15. Coefficient of friction	SS 485: 2011	
	16. Sampling and basic for acceptance	(SS 483: 2000) ISO 13006: 2012 (BS EN 14411: 2012) ISO 10545-1: 1995	
<b>L. ROCKS</b>	1. Unconfined compressive strength of core specimens	ASTM D7012: 2014 Method C	LJP, SW, JUL

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<b>M. NATURAL STONE/ GRANITE</b>	2. Water (moisture) content of soil and rock	ASTM D2216: 2010	
	3. Point load strength index	ASTM D5731: 2008	
	1. Water absorption and bulk specific gravity	ASTM C97/C97M: 2009	LJP, SW, JUL
<b>M. STRUCTURAL FIXINGS</b>	2. Compressive strength	ASTM C170/C170M: 2014a BS EN 1926: 2006, Annex A	LJP, SW, JUL
	Determination of tensile strength (pull out strength) of structural fixings in concrete and masonry	BS 5080-1: 1993	LJP, DAV
<b>N. BITUMINOUS MIXTURES</b>	1. Bitumen content	ASTM D2172/D2172M: 2011	LJP, SW, JUL, YM O1 to O10
	2. Density of premix on cored samples	BS 598-104: 2005	
	3. Density of cored premix with sample preparation	BS 598-104: 2005	
	4. Marshall density	BS 598-107: 2004 ASTM D1559: 1989	
	5. Marshall stability	BS 598-107: 2004 ASTM D1559: 1989	
	6. Particle size distribution	BS 812-103.1: 1985	
	7. Percentage voids density of core method	BS 598-104: 2005	

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<b>P. PRECAST CONCRETE UNITS</b>	8. Thickness of Core	ASTM D3549/D3549M: 2011 BS EN 12697-36: 2003		
	9. Asphalt content by ignition method	ASTM D6307: 2010		
	10. Los Angeles abrasion	BS EN 12697-17: 2004		
	11. Measuring surface frictional properties using the British pendulum tester	ASTM E303: 1993 (2013) SS 589: 2013 BS EN 1436:2007+A1:2008	LJP, DAV	
	12. Measuring pavement macrotexture depth using a volumetric technique	ASTM E965: 1996 (2006) BS EN 13036-1: 2010	LJP, DAV	
	<ul style="list-style-type: none"> <li>Concrete Paving Blocks</li> </ul>	1. Compressive strength	BS 6717-1: 1993	LJP, SW, JUL
		2. Visual aspects and appearance (Annex J)	) BS EN 1338: 2003 )	
		3. Shape and dimensions, thickness of facing layer (Annex C)	) )	
		4. Tensile splitting strength (Annex F)		
		5. Slip/Skid resistance (USRV) (Annex I)		
		6. Total water absorption (Annex E)		
	<ul style="list-style-type: none"> <li>Concrete Kerb, Channel</li> </ul>	1. Water absorption	SS 214: 2009	
2. Transverse strength		BS 7263-1: 1994		
<ul style="list-style-type: none"> <li>Slab (Aeration/Porous)</li> </ul>	1. Water absorption	BS 7263-1: 1994		
	2. Transverse strength			
<ul style="list-style-type: none"> <li>Concrete Paving Flags</li> </ul>	1. Visual aspects and appearance (Annex J)	BS EN 1339: 2003		

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<ul style="list-style-type: none"> <li>Concrete Kerb Units</li> </ul>	2. Bending strength and breaking load (Annex F) 3. Slip/Skid resistance (USRV) (Annex I) 4. Total water absorption (Annex E)	BS EN 1340: 2003	
	1. Visual aspects and appearance (Annex J) 2. Shape and dimensions, thickness of facing layer (Annex C) 3. Bending strength (Annex F) 4. Slip/Skid resistance (USRV) (Annex I) 5. total water absorption (Annex E)		
<ul style="list-style-type: none"> <li>Clay Pavers</li> </ul>	1. Shape and dimensions (Annex B) 2. Transverse breaking load (Annex D) 3. Abrasion resistance (Annex E) 4. Slip/Skid resistance (USRV)	BS EN 1344: 2013	
<b>Q. GROUTS</b> <ul style="list-style-type: none"> <li>Geotechnical Grouting</li> </ul>	1. Bleeding  2. Setting Time  3. Density by Mud Balance  4. Marsh Cone Viscosity  5. Viscosity & Yield Strength  6. Workability by Abraham Cone  7. Penetration by Filter Pump  8. Compressive Strength	*BS EN 12715:2000 ASTM C940-10a  BS EN 196-3: 2005 + A1: 2008  BS EN ISO 10414-1: 2008  BS EN 14117: 2004  BS EN 10414-1 : 2008  BS EN 12350-8: 2010  BS EN 14497:2004  BS 1377-7:1990 Section 7 (Load Frame Method)	LJP, SW, JUL, TBK



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## Note :

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025:2005. A laboratory's fulfilment of the requirements of ISO/IEC 17025:2005 means the laboratory meets both the technical competence requirements and **management system requirements** that are necessary for it to consistently deliver technically valid test results. The **management system requirements** in ISO/IEC 17025:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 **Quality Management Systems — Requirements** and are aligned with its pertinent requirements.