

Schedule

Admaterials Technologies Pte Ltd
58 Sungei Kadut Loop
Singapore 729501

Certificate No. : LA-2008-0422-B
Issue No. : 11
Date : 23 November 2016
Page : 1 of 28

FIELD OF TESTING : Civil Engineering Testing

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
A. AGGREGATE	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 A33
	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	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 2 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	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)	LJP,SW,JUL
	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	

The SAC Programme is managed by SPRING Singapore

2 Fusionopolis Way, #15-01 Innovis, Singapore 138634 Tel: +65 6279 1855 / 1856 / 1800 Fax: +65 6659 0640

www.sac-accreditation.gov.sg

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 3 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	18. Soundness Test	ASTM C88 : 2013 BS 812 Part 121: 1989 BS EN 1367-2: 2009 SS 73 Part 21: 1992	LJP,SW,JUL
	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+A1:2015 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	

The SAC Programme is managed by SPRING Singapore

2 Fusionopolis Way, #15-01 Innovis, Singapore 138634 Tel: +65 6279 1855 / 1856 / 1800 Fax: +65 6659 0640

www.sac-accreditation.gov.sg

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 4 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
B. SOIL	30. Percentage of fractured particles in coarse aggregate	ASTM D5821: 2013	LJP,SW,JUL
	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	
	33. Polished Stone Value	BS EN 1097-8: 2009 BS 812-114: 1989	
	1. Direct Shear Box Test	BS 1377 Part 7: 1990 (Clause 4.5.4)	LJP, SW, JUL B1 to B12
	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	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 5 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	10. California Bearing Ratio	BS 1377-4: 1990, Method 7	
	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 - 15 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
	16. Density	BS 1377-2 :1990 Section 7	LIP, SW, JUL
C. CONCRETE			
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 C13
	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	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 6 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY	
	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		
	7. Laboratory Mixing And Sampling	SS 78: Pt 25: 1987 BS 1881: Pt 125: 2013 BS EN 480-1:2014		
	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		
	2 Hardened Concrete (Physical Tests)	1. Petrographic Examination Of Hardened Concrete	ASTM C856 : 2014	LJP, SW, ZR
		2. Density (Hardened Concrete)	SS 78 : Pt A14 : 1987 BS 1881 : Pt 114 : 1983 BS EN 12390-7 : 2009	LJP, SW, JUL, WX C2 to C6
		3. Compressive Strength Of Cubes	SS 78 : Pt A16 : 1987 BS 1881 : Pt 116 : 1983 BS EN 12390-3 : 2009 AS 1012.9 : 2014	
		4. Water Absorption	SS 78 : Pt A22 : 1987 BS 1881 : Pt 122 : 2011 ASTM C642 : 2013	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 7 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	5. Water Permeability	DIN 1048: Pt 5 – 1991	
	6. Depth Of Penetration Of Water Under Pressure	BS EN 12390-8: 2009	
	7. Making Test Beams	SS 78 Part A9: 1987 BS 1881: Pt 109: 1983 BS EN 12390-1: 2012 BS EN 12390-2: 2009	LJP, SW, JUL
	8. Making Test Cylinders	SS 78 Part A10: 1987 BS 1881: Pt 110: 1983 BS EN 12390-1: 2012 BS EN 12390-2: 2009	LJP, SW, JUL
	9. Tensile Splitting Strength Of Test Specimens	SS 78 Part A17: 1987 BS 1881: Pt 117: 1983 BS EN 12390-6: 2009	LJP, SW, JUL
	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	LJP, SW, JUL
	11. Flexural Strength	SS 78 Part A18: 1987 BS 1881: Pt 118: 1983 BS EN 12390-5: 2009	LJP, SW, JUL, WX
	12. Compressive Strength Of Cores	SS 78 Part A20: 1987 BS 1881: Pt 120: 1983 BS EN 12504-1: 2009 AS 1012.9 : 2014	LJP, SW, JUL, WX
	13. Static Modulus of Elasticity in Compression	BS 1881 : Pt 121 : 1983 ASTM C469 / C469M -14	LJP, SW, JUL, WX
	14. Initial Surface Water Absorption	BS 1881: Pt 208: 1996	LJP, SW, JUL

The SAC Programme is managed by SPRING Singapore

2 Fusionopolis Way, #15-01 Innovis, Singapore 138634 Tel: +65 6279 1855 / 1856 / 1800 Fax: +65 6659 0640

www.sac-accreditation.gov.sg

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 8 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	15. Length Change (Drying Shrinkage & Wetting Expansion)	ASTM C157/157M: 08(2014)e1	LJP, SW, JUL, WX
	16. Concrete's ability to resist chloride ion penetration (Rapid Chloride Permeability Test)	ASTM C1202: 2012	LJP, SW, JUL, WX
	17. Coefficient of Permeability	Darcy's Theory – HDB Test Method ADM/CE/017: 2013	LJP, SW, JUL
	18. Water Penetration & Water Gain	HDB Test Method (1 April 1992) ADM/CE/018: 2014	LJP, SW, JUL
	19. Compressive Strength of Moulded Cylinder Specimens	BS EN 1290-3 : 2009 AS 1012.9: 2014	LJP, SW, JUL, WX
	20. Microscopical Determination of the Air-Void System in Hardened Concrete	ASTM C457 / C457M -12 (Procedure B)	LJP, SW, JUL, ZR
	21. Water Sorptivity	ASTM C1585 -13 ADM / CE / 020: 2016	LJP, SW, JUL

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 9 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
3 Hardened Concrete (Non-Destructive Tests)	1. Determination Of Rebound Number Of Hardened Concrete	ASTM C805 / C805M: 2013 BS EN 12504-2: 2012	LJP, SW, DAV
	2. Ultrasonic Pulse Velocity Measurement	ASTM C597: 2009 BS EN 12504-4: 2004	
	3. Covermeter Test	BS 1881: Pt 204: 1988	
	4. Strain Measurement	BS 1881: Pt 206: 1986	
	5. Initial Surface Absorption	BS 1881: Pt 208: 1996	
	6. Half-Cell Potential Measurement	ASTM C876 - 15	
	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)	
D. REPAIR MATERIAL			
1 Non-Shrink Grout (For Pressure Grouting)	1. Flow Consistency	ASTM C939 / C939M - 16	LJP, SW, JUL TBK
	2. Compressive Strength	ASTM C942: 15	
	3. Expansion / Shrinkage	ASTM C940: 16	
	4. Bleeding	ASTM C940: 16	
	5. Setting time (initial & final set)	ASTM C953: 2010	
2 Non-Shrink Grout (For Semi-Precast Construction)	1. Flow Consistency	BS 4551-1: 1998 ASTM C1437 - 15	LJP, SW, JUL TBK
	2. Compressive Strength	BS EN 196-1: 2016 ASTM C109/ C109M – 16a	

The SAC Programme is managed by SPRING Singapore

2 Fusionopolis Way, #15-01 Innovis, Singapore 138634 Tel: +65 6279 1855 / 1856 / 1800 Fax: +65 6659 0640

www.sac-accreditation.gov.sg

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 10 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	3. Change in Height	ASTM C827/C827M: 2010	
	4. Setting Time	BS EN 196-3:2005 + A1:2008	
	5. Bond Strength at 28 Days	BS 6319: Part 4: 1984 BS EN 12615: 1999	
3 Polymer Modified Cement Mortar	1. Compressive Strength	ASTM C109/C109M – 16a BS EN 12190: 1999 ASTM C349: 2014	LJP,SW,JUL
	2. Stiffening Time	BS EN 1015-9: 1999	
	3. Shrinkage at 28 days	ASTM C531: 2000 (2012)	
	4. Tensile pull off strength (before and after weathering)	BS EN 1015-12: 2000 ADM/CE/010: 2010 ADM/CE/011: 2010	
4 Bonding Agent	1. Slant Shear Bond Strength (Type I)	ASTM C1042: 1999	LJP,SW,JUL
	2. Slant Shear Bond Strength (Type II)	ASTM C1042: 1999	
	3. Total Solids Content	ISO 124: 2014	
5 Waterproofing Material (External Wall Seepage Repair)	1. Tensile pull off strength	ASTM D4541: 2002 (Method A, Type 1 Tester) ASTM D7234: 2012	LJP, SW, JUL
	2. Water Vapour Transmission (Water Method only)	ASTM E96 / E96M - 16 ASTM D1653: 2013	
	3. Tensile Strength & Elongation at Break	ASTM D412: 15a Method A only	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 11 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
6 Flexible Cementitious Waterproof Membrane (Water-Based)	4 Crack Bridging	ASTM C836 / C836M - 15 ADM/CE/001: 2010 AS/NZS 4548.5: 1999	LJP, SW, JUL
	1. Tensile pull off strength	ASTM D4541: 2002 (Method A, Type 1 Tester) ASTM D7234: 2012	
	2. Tensile Strength & Elongation at Break	ASTM D412 – 15a Method A	
	3. Crack Bridging	ASTM C836/C836M - 15 ADM/CE/002: 2010	
	4. Water Penetration Test	DIN 1048: Pt 5-1991 ADM/CE/003: 2010	
	5. Initial Hardness (Shore A)	ASTM D2240 – 15	
7 Flexible Non-Cementitious Waterproof Membrane (Water-Based)	6. Set to touch	ASTM D1640 / D1640M: 2014	LJP, SW, JUL
	1. Tensile pull off strength	ASTM D4541: 2002 (Method A, Type 1 Tester) ASTM D7234: 2012	
	2. Tensile Strength & Elongation at Break	ASTM D412 – 15a	
	3. Crack Bridging	ASTM C836 / C836M - 15 ADM/CE/002: 2012	
	4. Water Penetration Test	DIN 1048: Pt 5-1991 ADM/CE/004: 2010	
	5. Initial Hardness (Shore A)	ASTM D2240 - 15	
6. Set to touch	ASTM D1640 / D1640M: 2014		

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 12 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
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 : 15a Method A	
	3. Crack Bridging	ASTM C836 / C836M - 15 ADM/CE/002: 2012	
	4. Water Vapour Transmission	ASTM E96 / E96M - 16	
	5. Water Penetration Test	DIN 1048: Pt 5 -1991 ADM/CE/005: 2010	
	6. Initial Hardness (Shore A)	ASTM D2240 - 15	
	7. Accelerated Weathering	ASTM G154: 2012a ADM/CE/007: 2012	
	8. Set to touch	ASTM D1640 / D1640M: 2014	
	9. Solid Content	SS 133: 1987 Appendix D	
9 Repair Material - Reinforcement Primer / Reinforcement Bar	1. Half-Cell Potential	ASTM C876 - 15	LJP,SW,JUL
	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	LJP,SW,JUL
	2. Compressive Strength	ASTM C579: 2001 (2012)	
	3. Coefficient of Linear Thermal Expansion	ASTM C531: 2000 (2012)	
	4. Water Absorption	ASTM C413: 2001 (2012)	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 13 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
11 Epoxy Resin for Injection	5. Tensile Strength	ASTM C307 : 2003 (2012)	LJP,SW,JUL,
	6. Flexural Strength	ASTM C580: 2002 (2012)	
	1. Determination of Bond Strength	ASTM C882/C882M:2013a	
	2. Density	SS 5: Pt B7: 2013 ASTM D1475: 2013	
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		
	5. Water Absorption and Soluble Matter		
	6. Water Vapour Transmission		
	7. Hydrostatic test		
	8. Resistance to leakage at joint		
13 Waterproofing Membrane	1. Thickness and Mass Per Unit Area	DIN 53353 : 1979-12 DIN 16726 : 2011-01 BS EN 1849-1: 2000 BS EN 1849-2 : 2009 BS EN 22286: 1994 (BS 3424-1: 1994) (ISO 2286 : 1986)	LJP, SW, JUL, JW
	2. Tensile Strength & Elongation at Break	SS 374 : 1994 ASTM D412 – 15a BS EN 12311-1 : 2000 BS EN 12311-2 : 2013	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 14 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	3. Dimensional Stability	SS 374 : 1994 BS EN 1107-1 : 2000 BS EN 1107-2 : 2001 DIN 53377:2015-04 DIN 16726: 2011-01	
	4. Watertightness / Behaviour under Hydrostatic Pressure	SS 374 : 1994 BS EN 1928 : 2000 DIN 16726: 2011-01 BS EN 12390-8: 2009, based on BS EN 14891 : 2012, Part A7 for Concrete mix design	
	5. Peel or Stripping Strength to Concrete	ASTM D903 -98 (2010)	
	6. Puncture Resistance	ASTM E154 / E154M-08a (2013)e1, Section 10	
	7. Impact Resistance	ADM/CE/021: 2016 & ASTM G14-04 (2010)e1	
	8. Static Crack Bridging	ASTM C836 / C836 -15 & ASTM C1305 - 08 BS EN 1062-7 : 2004, Method A	
	9. Pull-Off Adhesion Strength	ASTM D4541: 2002 (Method A, Type 1, Tester) ASTM D7234 - 12 BS EN 1542 : 1999	
	10. Artificial ageing by long term Exposure to elevated temperature	BS EN 1296 : 2001 SS 374 : 1994 DIN 16726 : 2011-01	

The SAC Programme is managed by SPRING Singapore

2 Fusionopolis Way, #15-01 Innovis, Singapore 138634 Tel: +65 6279 1855 / 1856 / 1800 Fax: +65 6659 0640

www.sac-accreditation.gov.sg

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 15 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
E. BUILDING MATERIAL	11. Behaviour after Storage in Aqueous Solutions	DIN 16726: 2011-01	
	12. Chemical Resistance	BS EN 14414 : 2004 (METHOD A & B)	
	13. Resistance to Leaching	BS EN 14415 : 2004 (METHOD A & B)	
	14. Hydrostatic Pressure Resistance	ASTM D5385 / D5385M -93 (2014)e1	
	15. Lateral Water Migration	ADM/CE/022: 2016 & ASTM D5385 / D5385M-93 (2014)e1	
1 Tile Adhesive (Fast and Normal Set)	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	
2 Tile Grout	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	

The SAC Programme is managed by SPRING Singapore

2 Fusionopolis Way, #15-01 Innovis, Singapore 138634 Tel: +65 6279 1855 / 1856 / 1800 Fax: +65 6659 0640

www.sac-accreditation.gov.sg

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 16 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
3 Prepacked Floor Screed / Prepacked Waterproof Screed	1. Average compressive strength	ASTM C109 / 109M: 16a	LJP,SW,JUL
	2. Flow	ASTM C1437: 15	
	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	
4 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	
5 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	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 17 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY		
	3. Compressive Strength	BS EN 1015-11: 1999	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			
	6 Acrylic Polymer Cementitious Coating	1. Compressive Strength		ASTM C109 / C109M: 16a	LJP, SW, JUL
		2. Flexural Strength		ASTM C348: 2014	
3. Tensile Strength		ASTM C307: 2003 (2012)			
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			
7 Self-Leveling Screed	1. Compressive Strength	ASTM C109/C109M: 16a	LJP, SW, JUL		
	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			

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 18 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
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 / 939M -16	
	8. Water Absorption	ASM C413: 2001 (2012) (Method A)	
	1. Staining and colour change	ASTM C510: 2005a (2011)	LJP,SW,JUL
	2. Extrusion rate	ASTM C1183/C1183M:2013	
	3. Rheological (flow) properties	ASTM C639 - 15	
	4. Indentation hardness	ASTM C661 - 15	
	5. Tack-free time	ASTM C679 - 15	
	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 – 15a	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 19 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
F. PAINT / COATING	1. Adhesion (Pull Off) strength	ASTM D4541: 2002 (Method A, Type I Tester) ASTM D7234: 2012	LJP, SW, JUL, DAV
	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 ASTM D6132 - 13	LJP, DAV
G. ADMIXTURES	1. Water Reduction	BS EN 12350-2: 2009 BS EN 480-1: 2014 SS EN 934-2: 2008	LJP, SW, JUL
	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	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 20 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
H. CEMENT	7. Setting Time	BS EN 480-2: 2006 BS EN 480-1: 2014 SS EN 934-2: 2008	LJP, SW, JUL WX
	8. Capillary Absorption	BS EN 480-5: 2005 BS EN 480-1: 2014 SS EN 934-2: 2008	
	9. Sampling	BS EN 934-6: 2001 SS EN 934-6: 2008 (SS 320: 1987)	
	1. Ordinary Portland Cement/ Sulphate-Resisting and Portland Blast Furnace Slag Cement	1. Determination of Strength BS EN 196-1: 2016 ASTM C109 / C109M – 16a SS 397 Part 1: 1997	
	Ground Granulated Blast Furnace Slag, Silica Fume & Fly Ash	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	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 21 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
2. Masonry Cement	6. Activity Index	BS EN 196-1: 2016 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	LJP, SW, JUL, WX
	1. Setting Time	BS EN 196-3: 2005 + A1: 2008	LJP, SW, JUL,
	2. Soundness	BS EN 196-3: 2005 + A1: 2008	
	3. Compressive Strength	BS EN 196-1: 2016	
	4. Consistence of Fresh Mortar	BS EN 413-2: 2005	
	5. Air Content	BS EN 413-2: 2005	
	6. Water Retentivity	BS EN 413-2: 2005	
I. CURING COMPOUND	7. Sieve Residue	BS EN 196-6: 2010	
	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)	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 22 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY	
J. MASONRY UNITS	1. Ferrocement Roof Slabs / Sunbreaker Slabs	1. Dimension and Density	BS EN 12390-7: 2009	LJP, SW, JUL, DAV
		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	
	2. Burnt Clay and Shale Bricks	1. Determination of Dimensions	SS 103: 1974	LJP, SW, JUL
		2. Determination of Compressive Strength		
		3. Water Absorption Test		
		4. Soluble Salt Content		
		5. Efflorescence Test		
	3. Masonry Units / Autoclaved Aerated Concrete	1. Compressive Strength	BS EN 772-1: 2011+A1 : 2015 ASTM C1693 – 11, Section 6	LJP, SW, JUL, WX
		2. Density	BS EN 772-13 : 2000 BS EN 678 : 1994 ASTM C1693 -11, Section 7	
		3. Drying Shrinkage	BS EN 680: 2005 ASTM C1693-11, Section 8	
4. Water Absorption due to Capillary Action		BS EN 772-11 : 2011		
5. Dimensions		BS EN 772-16 : 2011		

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 23 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
K. CERAMIC WALL AND FLOOR TILES	1. Determination of Dimensions	(SS 483: 2000) ISO 13006: 2012 (BS EN 14411: 2012) ISO 10545-2: 1995	LJP, SW,JUL
	2. Determination of Straightness of Sides		
	3. Determination of Rectangularity		
	4. Determination of Surface Flatness		
	5. Determination of Surface Quality		
	6. Determination of Resistance to Deep Abrasion	(SS 483: 2000) ISO 13006: 2012 (BS EN 14411: 2012) ISO 10545-6: 2010	LJP, SW,JUL
	7. Tensile and Shear Adhesion Bond Strength	ASTM C482 : 2002 (2014)	
	8. Determination of Modulus of Rapture	(BS EN 14411: 2012) ISO 13006: 2012 ISO 10545-4: 2014 (SS 483 : 2000)	
	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)	

The SAC Programme is managed by SPRING Singapore

2 Fusionopolis Way, #15-01 Innovis, Singapore 138634 Tel: +65 6279 1855 / 1856 / 1800 Fax: +65 6659 0640

www.sac-accreditation.gov.sg

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 24 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
L. ROCKS	12. Reverse Staining	ADM/CE/014: 2011	LIP, SW, JUL
	13. Stain Resistance	(SS 483: 2000) ISO 13006: 2012 (BS EN 14411: 2012) SS 57: 1989 Appendix H.7 ISO 10545-14 : 2015	
	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	
	17. Colourfastness	SS 57 : 1989 Appendix F SS 301 : 1985 Appendix H	
	1. Unconfined compressive strength of core specimens	ASTM D7012: 2014 (Method C)	
	2. Water (moisture) content of soil and rock	ASTM D2216: 2010	
	3. Point load strength index	ASTM D5731: 2008	
	4. Petrographic Description of Rocks	ISRM SUGGESTED METHODS – 1978	LJP, SW, JUL, ZR

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 25 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
M. NATURAL STONE/ GRANITE	1. Water absorption and Bulk Specific Gravity	ASTM C97 / C97M - 15	LJP, SW, JUL
	2. Compressive strength	ASTM C170 / C170M - 16 BS EN 1926: 2006, Annex A	
	3. Petrographic Examination	BS EN 12407 : 2007 BS EN 12670 : 2002	LJP, SW, JUL, ZR
N. STRUCTURAL FIXINGS	1. Determination of tensile strength (pull out strength) of structural fixings in concrete and masonry	BS 5080-1: 1993	LJP, DAV
O. BITUMINOUS PREMIXES	1. Bitumen Content	ASTM D2172 / D2172M: 2011	LJP, SW, JUL, YM
	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	
	8. Thickness of Core	ASTM D3549/D3549M: 2011 BS EN 12697-36: 2003	
	9. Asphalt content by ignition Method	ASTM D6307: 2010	

The SAC Programme is managed by SPRING Singapore

2 Fusionopolis Way, #15-01 Innovis, Singapore 138634 Tel: +65 6279 1855 / 1856 / 1800 Fax: +65 6659 0640

www.sac-accreditation.gov.sg

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 27 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
5. Concrete Kerb Units	3. Slip/Skid Resistance (USRV) (Annex I)	BS EN 1339: 2003	LIP, SW, JUL
	4. Total Water Absorption (Annex E)		
	1. Visual Aspects and Appearance (Annex J)	BS EN 1340: 2003	
	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)			
6. Clay Pavers	1. Shape and Dimensions (Annex B)	BS EN 1344: 2013	LIP, SW, JUL
	2. Transverse Breaking Load (Annex D)		
	3. Abrasion Resistance (Annex E)		
	4. Slip/Skid Resistance (USRV)		
Q. GROUTS Geotechnical Grouting	1. Bleeding	*BS EN 12715:2000 ASTM C940-16	LJP, SW, JUL, TBK
	2. Setting Time	BS EN 196-3: 2005 + A1: 2008	
	3. Density by Mud Balance	BS EN ISO 10414-1: 2008	
	4. Marsh Cone Viscosity	BS EN 14117: 2004	
	5. Viscosity & Yield Strength	BS EN ISO 10414-1: 2008	
	6. Workability by Abraham Cone	BS EN 12350-8: 2010	

Schedule



Certificate No. : LA-2008-0422-B

Issue No. : 11

Date : 23 November 2016

Page : 28 of 28

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	7. Penetration by Filter Pump	BS EN 14497:2004	
	8. Compressive Strength	BS 1377-7:1990 Section 7 (Load Frame Method)	

Approved Signatories

Lu Jin Ping LJP
Sherly Wijaya SW
Julifin JUL
David Sun DAV
Zhangrong ZR
Tham Yue Meng YM
Tang Bee Kim TBK
Wang Xiu WX
James Wong JW

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.