SINGAPORE LABORATORY ACCREDITATION SCHEME

Accredited Laboratory SAC-SINGLAS

Schedule

Element Construction Testing (S) Pte. Ltd.
4 Tuas Loop, Tuas Connection
Singapore 637342

Certificate No. : LA-2008-0422-B

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ACCREDITATION STANDARD: ISO/IEC 17025:2017
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 932-3:2022 BS 7943:1999 BS 812-104:1994 ASTM C295/C295M-19	) SW, JAA
	2. Potential Alkali Reactivity (Mortar Bar Method)	ASTM C1260-23	) SW, JAA
	3. Particle Size Distribution / Sieve Analysis	SS 73:1974 ASTM C136/C136M-25 BS 812-103.1:1985 BS EN 933-1:2012 ASTM D546-24 (ASTM D242/D242M-19(2024)	) SW, ZMM
	4. Fineness Modulus	ASTM C136/C136M-25	) SW, ZMM
	5. Clay, Silt and Dust (Decantation Method)	SS 73:1974 (Except Method A) BS 812-103.1:1985 ASTM C117-23 BS EN 933-1:2012	) SW, ZMM
	6. Moisture Content (Oven Dried Method)	SS 73:1974 BS 812-109:1990 BS EN 1097-5:2008	) SW, ZMM
	7. Bulk Density	BS EN 1097-3:1998 BS 812-2:1995 SS 73:1974	) SW, ZMM

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	8. Relative Density & Water Absorption	BS EN 1097-6:2022 BS 812-2:1995 SS 73:1974 ASTM C127-25 ASTM C128-25 (Gravimetric Method)	) SW, ZMM
A. AGGREGATE	9. Sampling	BS EN 932-1:1997 BS 812-102:1989 SS 73:1974	) SW, ZMM
	10. Organic Impurities	ASTM C40/C40M-20 SS 73:1974	) SW
	11. Shell Content	SS 73 Part 6:1992 BS 812-106:1985 BS EN 933-7:1998	) SW, ZMM
	12. Flakiness Index	SS 73-5.1:1992 BS EN 933-3:2012 BS 812-105.1:1989	) SW, ZMM
	13. Elongation Index	SS 73:1974 BS 812-105.2:1990	) SW, ZMM
	14. Impact Value	SS 73: 1974 BS 812-112:1990	) SW, ZMM
	15. Crushing Value	SS 73: 1974 BS 812-110:1990	) SW, ZMM
	16. 10% Fines Value	SS 73: 1974 BS 812-111:1990	) SW, ZMM
	17. Los Angeles Abrasion	SS 73: 1974 ASTM C131/C131M-20 BS EN 1097-2:2020 ASTM C535-16(2024)	) SW, ZMM
	18. Soundness Test	ASTM C88/C88M-24 BS 812-121:1989 BS EN 1367-2:2009 SS 73-21:1992	) SW, ZMM
	19. Shape & Surface Texture	SS 73:1974	) SW
	20. Drying Shrinkage	SS 73 Part 20:1992 BS EN 1367-4:2008 BS 812-120:1989	) SW, ZMM

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
A.	AGGREGATE	21. Assessment of Fines – Methylene Blue Test	BS EN 933-9:2022	) SW, ZMM
		22. Shape Index	BS EN 933-4:2008	) SW, ZMM
		23. Angularity Number	SS 73:1974	) SW
		24. Assessment of Fines - Sand Equivalent Test	BS EN 933-8:2012+A1:2015 ASTM D2419-22	) SW, ZMM
		25. Constituents of Coarse Recycled Aggregates	BS EN 933-11:2009 SS 544-2:2019+A1:2021	) SW, ZMM
		26. Organic Contaminators by Mortar Method	BS EN 1744-1:2009+A1:2012 Clause 15.3	) SW
		27. Coral Content (Shell Content in Fine Aggregate)	SANS 5840:2.02ED 2008(R2014)	) SW, ZMM
		28. Aggregate Abrasion Value	BS 812-113:1990 BS EN 1097-8:2020	) SW, ZMM
		29. Influence of Recycled Aggregate Extract on the Initial Setting Time of Cement	BS EN 1744-6:2006	) SW
		30. Percentage of Fractured Particles in Coarse Aggregate	ASTM D5821-13(2025)	) SW, ZMM
		31. Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate	ASTM D4791-19(2023)	) SW, ZMM
		32. Clay Lumps and Friable Particles in Aggregates	ASTM C142/C142M-17(2023)	) SW, ZMM
		33. Polished Stone Value	BS EN 1097-8:2020 BS 812-114:1989	) SW, ZMM
		34. Lightweight Particles in Aggregate	ASTM C123/C123M-23	) SW, ZMM
		35. Particle Density of Filler	BS EN 1097-7:2022	) SW, ZMM

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES		STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		36.	Potential Alkali Reactivity of Aggregates and Effectiveness of ASR Mitigation Measures (Miniature Concrete Prism Test. MCPT)	AASHTO T 380-22	) SW, JAA
A.	**AGGREGATE**	37.	Length Change of Concrete Due to Alkali-Carbonate Rock Reaction	ASTM C1105-23a	) SW, JAA
		38.	Length of Change Due to Alkali-Silica Reaction	ASTM C1293/C1293M-23a	) SW, JAA
		39.	Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)	ASTM C1567-25	) SW, JAA
		40.	Resistance to Wear (Micro-Deval)	BS EN 1097-1:2023	) SW, ZMM
		41.	Particle Length Test	BS EN 13450:2013 Clause 4.7	) SW, ZMM
B.	**SOIL**	1.	Shear Strength by Direct Shear (Shearbox Method)	BS 1377-7:1990 Section 4.5.4 BS 1377-2:2022 Section 25 BS EN ISO 17892-10:2018	) SW, WH, ZMM
		2.	Compaction Test Maximum and Minimum Dry Density)	BS 1377-2:2022 Section 12	) SW, WH
		3.	Compaction Test (Dry Density / Moisture Content)	BS 1377-2:1990 Section 3 BS 1377-2:2022 Section 11 ASTM D1557-12(2021) ASTM D698-12(2021) AASHTO T180-25 AASHTO T99-25	) SW, WH
		4.	Unconfined Compressive Strength	BS 1377-7:1990 Section 7 BS 1377-2:2022 Section 27 ASTM D2166/D2166M-24 BS EN ISO 17892-7:2018	) SW, WH
		5.	Moisture Content	BS 1377-2:1990 Section 3 ASTM D4959-24 BS 1377-2:2022 BS EN ISO 17892-	) SW, ZMM, WH

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		1:2014+A1:2022 ASTM D2216-19 ASTM D4944-25a ASTM D4643-25	
B. SOIL	6. Liquid Limit	BS 1377-2:1990 Section 4.3 BS 1377-2:2022 Section 5 ASTM D4318-17e1 ISO 17892-12:2018+A2:2022 BS EN ISO 17892-12:2018+A2:2022	) SW, WH
	7. Plastic Limit & Plasticity Index	BS 1377-2:1990 Section 5 BS 1377-2:2022 Section 6 ASTM D4318-17e1 ISO 17892-12:2018+A2:2022 BS EN ISO 17892-12:2018+A2:2022	) SW, WH
	8. Linear Shrinkage	BS 1377-2:1990 Section 6.5 BS 1377-2:2022 Section 7	) SW, WH
	9. Particle Size Distribution	BS 1377-2:1990 Section 9.2, 9.3 & 9.5 BS 1377-2:2022 Section 10 BS EN ISO 17892-4:2016	) SW, WH
	10. California Bearing Ratio	BS 1377-2:2022, Section 15 ASTM D1883-21	) SW, WH
	11. Particle Density	BS 1377-2:1990 Section 8 BS 1377-2:2022 Section 9 BS EN ISO 17892-3:2015	) SW, WH
	12. Percentage of Fines (Finer than 75 micron)	ASTM D1140-25	) SW, WH
	13. Sand Replacement	BS 1377-9:1990, Method 2.1 & 2.2 BS 1377-9:2025 Clause 4.1 & 4.2 ASTM D1556/D1556M-24 ASTM D4944-25a	) SW, AC
	14. In-place Density & Water Content (NDG)	ASTM D6938-23 ASTM D2922-05 ASTM D3017-05 BS 1377-9:1990 Clause 2.5 BS 1377-9:2025 Clause 4.5	) SW, AC

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	15. Plate Loading Test	BS 1377-9:1990 Method 4.1 BS 1377-9:2025 Clause 6.1	) AC
	16. Density	BS 1377-2:1990 Section 7 BS 1377-2:2022 Section 8 BS EN ISO 17892-2:2014	) SW, WH
B. SOIL	17. Permeability in Triaxial Cell	BS 1377-6:1990 Section 6 BS 1377-2:2022 Section 23 BS EN ISO 17892-11:2019	) SW, WH
	18. Unconsolidated Undrained Triaxial (UU)	BS 1377-7:1990 Section 8 BS 1377-2:2022 Section 28 BS EN ISO 17892-8:2018 ASTM D2850-26	) SW, WH
	19. Consolidated Undrained Triaxial (CU)	BS 1377-8:1990 Section 7 BS 1377-2:2022 Section 29 BS EN ISO 17892-9:2018 ASTM D4767-11(2020)	) SW, WH
	20. Consolidated Drained Triaxial (CD)	BS 1377-8:1990 Section 8 BS 1377-2:2022 Section 30 BS EN ISO 17892-9:2018 ASTM D7181-20	) SW, WH
	21. Oedometer (One-Dimensional Consolidation)	BS 1377-5:1990 Section 3 BS 1377-2:2022 Section 16 BS EN ISO 17892-5:2017 ASTM D2435/D2435M-25	) SW, WH
	22. Falling Head Permeability	KH. Head Vol. 2 BS EN ISO 17892-11:2019	) SW, WH
	23. Bentonite Content	EL-A-OP-CMT-SIN-MD224 Issue 1 June 2023	) SW, WH
	24. Soil Resistivity Using the Wenner Four-Electrode Method	ASTM G57-20 (BS EN IEC 62561-7:2024)	) SW, WH
	25. Corrosion Rates by Potentiodynamic Polarization Resistance Measurements	ASTM G59-23 ASTM G102-23 (BS EN IEC 62561-7:2024)	) SW
	26. Constant Head Permeability	BS 1377-5:1990 Section 5 BS 1377-2:2022 Section 23 KH. Head Vol. 2 BS EN ISO 17892-11:2019	) SW, WH

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	27. Redox Potential	BS 1377-3:2018+A1:2021 Clause 14	) SW, WH
	28. Thermal Conductivity of Soil and Rock	ASTM D5334-22a	) SW, WH
B. SOIL	29. Thermal Resistivity Measurements of Soils and Backfill Materials	IEEE Std. 442-2017 Clause 5.2	) SW, WH
	30. Shear Strength by the Laboratory Vane Method	BS 1377-7:1990 Clause 3 BS 1377-2:2022 Section 24	) SW, WH
	31. One-Dimensional Consolidation of Saturated Cohesive Soils Using Controlled-Strain Loading	ASTM D4186/D4186M-20e2	) SW, MZ, WH
	32. Consolidation Properties Using a Hydraulic Cell	BS 1377-6:1990 Clause 3	) SW, MZ, WH
C. CONCRETE **1. Fresh Concrete**	1. Slump Test	SS 78: Pt A2: 1987 BS 1881-102:1983	) SW, WCK
		BS EN 12350-2:2019	) SW, WCK, WYC
	2. Density (Fresh Concrete)	SS 78: Pt A7: 1987 BS 1881-107:1983	) SW, WCK)
		BS EN 12350-6:2019	) SW, WCK, WYC
	3. Sampling	BS EN 12350-1:2019	) SW, WCK, WYC
		SS 78 Part A1:1987 BS 1881-101:1983	) SW, WCK
	4. Air Content-Pressure Methods	BS EN 12350-7:2019	) SW, WCK, WYC
		SS 78-A6:1987 BS 1881-106:1983	) SW, WCK
	5. Flow Table Test	SS 78-A5:1987 BS 1881-105:1984 BS EN 12350-5:2019	) SW, WCK
	6. Degree of Compactibility / Consistence	BS EN 12350-4:2019 BS EN 14845-1:2007 Clause 6.5	) SW, WCK

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	7.	Laboratory Mixing and Sampling	SS 78-25:1987 BS 1881-125:2013	) SW, WCK
			BS EN 480-1:2023	) SW, WCK, WYC
	8.	Time of Setting of Concrete Mixtures by Penetration Resistance	ASTM C403/C403M-23	) SW, WCK
	9.	Slump-flow Test	BS EN 12350-8:2019	) SW
C. CONCRETE 1. Fresh Concrete	10.	V-funnel test	BS EN 12350-9:2010	) SW
	11.	L box Test	BS EN 12350-10:2010	) SW, WCK, WYC
	12.	Sieve Segregation Test	BS EN 12350-11:2010	) SW, WCK, WYC
	13.	J-ring Test	BS EN 12350-12:2010	) SW, WCK, WYC
	14.	Adiabatic Temperature Rise of Fresh Concrete	BS EN 12390-15:2019	) SW, WCK, WYC
	15.	Fibre Content in Fibre Reinforced Concrete	BS EN 14488-7:2006 Method B	) SW, WCK, WYC
C. CONCRETE 2. Hardened Concrete (Physical Test)	1.	Petrographic Examination of Hardened Concrete / Masonry Mortar	ASTM C856/C856M-25 ASTM C1324-25	) SW, JAA
	2.	Procedure and Terminology for the Petrographic Examination	BS 1881-211:2016	) SW, JAA
	3.	Density	SS 78-A14:1987 BS 1881-114:1983 BS EN 12390-7:2019	) SW, WCK, FN
	4.	Compressive Strength of Cubes	BS EN 12390-3:2019#@	) SW, WCK, FN, CLW, WYC, JG

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		SS 78-A16:1987 BS 1881-116:1983 AS 1012.9:2014	) SW, WCK, FN
	5. Water Absorption	SS 78-A22:1987 BS 1881-122:2011+A1:2020 ASTM C642-21	) SW, WCK, CLW
	6. Water Permeability	DIN 1048-5:1991	) SW, WCK, CLW
	7. Depth of Penetration of Water Under Pressure	BS EN 12390-8:2019	) SW, WCK, CLW
	8. Making Test Beams	SS 78-A9:1987 BS 1881-109:1983 BS EN 12390-1:2021 BS EN 12390-2:2019	) SW, WCK
	9. Making Test Cylinders	SS 78-A10:1987 BS 1881-110:1983 BS EN 12390-1:2021 BS EN 12390-2:2019	) SW, WCK
C. CONCRETE **2. Hardened Concrete (Physical Tests)**	10. Tensile Splitting Strength of Test Specimens	SS 78 Part A17: 1987 BS 1881-117:1983 BS EN 12390-6:2023	) SW, WCK, CLW
	11. Making of Test Cubes	SS 78: Pt A8: 1987 BS 1881-108:1983 BS EN 12390-1:2021 BS EN 12390-2:2019	) SW, WCK
	12. Flexural Strength	SS 78: Pt A18: 1987 BS 1881-118:1983 BS EN 12390-5:2019	) SW, WCK
		ASTM C78/C78M-22	) SW, WCK, CLW
	13. Compressive Strength of Cores	SS 78: Pt A20:1987 BS 1881-120:1983 BS EN 12504-1:2019 AS 1012.9:2014	) SW, WCK
		ASTM C39/C39M-26	) SW, WCK, CLW

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	14. Static Modulus of Elasticity in Compression	BS 1881-121:1983 ASTM C469/C469M-22 BS EN 12390-13:2021	) SW, WCK
	15. Initial Surface Water Absorption	BS 1881-208:1996	) SW, WCK, CLW
	16. Length Change (Drying Shrinkage & Wetting Expansion)	ASTM C157/C157M-24e1	) SW, WCK, CLW
	17. Concrete's Ability to Resist Chloride Ion Penetration (Rapid Chloride Permeability Test)	ASTM C1202-25	) SW, WCK, CLW
	18. Coefficient of Permeability	Darcy's Theory - HDB Test Method EL-A-OP-CMT-SIN-MD217 Issue 1 June 2023	) SW, WCK
	19. Water Penetration & Water Gain	HDB Test Method (1 April 1992) EL-A-OP-CMT-SIN-MD218 Issue 1 July 2023	) SW, WCK
	20. Compressive Strength of Moulded Cylinder Specimens	BS EN 12390-3:2019 AS 1012.9:2014	) SW, WCK,
		ASTM C39/C39M-26	) SW, WCK, CLW
	21. Microscopical Determination of Parameters of the Air-Void System	ASTM C457/C457M-24 (Procedure B)	) SW, JAA
	22. Water Sorptivity	ASTM C1585-20 EL-A-OP-CMT-SIN-MD220 Issue 2 June 2026	) SW, WCK, WYC
	23. Density, Absorption, and Voids	ASTM C642-21	) SW, WCK
	24. Calibration of Cube Mould	BS EN 12390-1:2021	) SW, WCK, WYC
	25. Autogenous Strain of Cement Paste and Mortar	ASTM C1698-19	) SW

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES		STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		26.	Flexural Tensile Strength (Limit of Proportionality (LOP), Residual)	BS EN 14651:2005+A1:2007	) SW, WCK, CLW
		27.	Fibre Content in Fresh and Hardened Concrete	BS EN 14721:2005+A1:2007	) SW, WCK
		28.	Chloride Migration Coefficient	NT BUILD 492:1999	) SW, WCK, CLW
		29.	Drying Shrinkage	BS ISO 1920-8:2009 BS EN 12390-16:2019 BS 8443:2005 (Annex B)	) SW, WCK
		30.	Creep in Compression	BS ISO 1920-9:2009 BS EN 12390-17:2019 ASTM C512/C512M-24#1	) SW, WCK
		31.	Energy Absorption Capacity of Fibre Reinforced Slab Specimens	BS EN 14488-5:2006	) SW, WCK
		32.	Carbonation Resistance of Concrete – Accelerated Carbonation Method	BS EN 12390-12: 2020	) SW, WCK
		33.	Fibre Content in Fibre Reinforced Concrete	BS EN 14488-7:2006 Method A	) SW, WCK
		34.	Bound Water Content	EL-A-OP-CMT-SIN-MD284 Issue 1 November 2024	) SW, WCK, CLW
		35.	Effect on Fibres in Concrete	BS EN 14845-2:2006	) SW, WCK, CLW
		36.	Flexural Strength of Fibre Reinforced Beam Specimen	BS EN 14488-3:2023 Clause 7 (Method B)	) SW, WCK, CLW
C.	**3. Hardened Concrete** **(Non-Destructive Tests)**	1.	Rebound Number of Hardened Concrete	ASTM C805/C805M-25 BS EN 12504-2:2021	) SW, AC, MB
		2.	Ultrasonic Pulse Velocity Measurement	ASTM C597-22 BS EN 12504-4:2021	) SW, AC, MB
		3.	Covermeter Test	BS 1881-204:1988	) SW, AC, MB

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES		STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		4.	Strain Measurement (Electrical Displacement)	BS 1881-206:1986	) SW
		5.	Initial Surface Absorption	BS 1881-208:1996	) SW
		6.	Half-Cell Potential Measurement	ASTM C876-22b	) SW, AC, MB
		7.	Depth of Carbonation, cores or Broken (on Concrete)	BS EN 14630:2006 BRE Publication (IP6/81) RILEM TC14-CPC 1988	) SW, AC, MB
		8.	Penetration Resistance	ASTM C803/C803M-25	) SW, AC, MB
		9.	Ground Penetration Radar	ASTM D6432-19	) SW, AC, MB
D.	**REPAIR MATERIAL** **1. Non-Shrink Grout** (For Pressure Grouting)	1.	Flow Consistency	ASTM C939/C939M-22	) SW
		2.	Compressive Strength	ASTM C942/C942M-21	) SW
		3.	Expansion/Shrinkage	ASTM C940-22	) SW
		4.	Bleeding	ASTM C940-22	) SW
		5.	Setting Time (Initial & Final Set)	ASTM C953-24	) SW
D.	**2. Non-Shrink Grout** (For Semi-Precast Construction)	1.	Flow Consistency	BS 4551-1:1998 ASTM C1437-20	) SW SW, EC, YL
		2.	Compressive Strength	BS EN 196-1:2016	) SW, WCK
				ASTM C109/C109M-26	) SW, WCK, CLW, EC, YL
		3.	Change in Height	ASTM C827/C827M-23	) SW, EC, YL
		4.	Setting Time	BS EN 196-3:2016	) SW, EC, YL
		5.	Bond Strength at 28 Days	BS 6319-4:1984 BS EN 12615:1999	) SW
D.	**3. Polymer Modified Cement Mortar**	1.	Compressive Strength	ASTM C109/C109M-26	) SW, WCK, CLW, EC, YL
				BS EN 12190:1999 ASTM C349-24	) SW
		2.	Stiffening time	BS EN 1015-9:1999	) SW

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		3. Shrinkage at 28 days	ASTM C531-18(2023)	) SW, EC, YL
		4. Tensile Pull Off Strength (Before and After Weathering)	BS EN 1015-12:2016	) SW, EC, YL
			EL-A-OP-CMT-SIN-MD210 Issue 1 June 2023 EL-A-OP-CMT-SIN-MD211 Issue 1 June 2023	) SW
D.	**4. Bonding Agent**	1. Slant Shear Bond Strength (Type I)	ASTM C1042:1999	) SW
		2. Slant Shear Bond Strength (Type II)	ASTM C1042:1999	) SW
		3. Total Solids Content	ISO 124:2014	) SW
D.	**5. Waterproofing Material for External Wall Seepage Repair**	1. Tensile Pull Off Strength	ASTM D4541-02 (Method A, Type I Tester) ASTM D4541-22 (Method B) ASTM D7234-22	) SW, YL, JC
		2. Water Vapour Transmission (Water Method only)	ASTM E96/E96M-24a ASTM E96/E96M-22ae1 ASTM D1653-13(2021)	) SW, YL, JC
		3. Tensile Strength & Elongation at Break	ASTM D412-16(2021) Method A	) SW, YL, JC
		4. Crack Bridging	ASTM C836/C836M-18(2022) EL-A-OP-CMT-SIN-MD201 Issue 1 July 2023 AS/NZS 4548.5:1999	) SW, YL, JC
D.	**6. Flexible Cementitious Waterproof Membrane (Water-Based)**	1. Tensile Pull Off Strength	ASTM D4541-02 (Method A, Type I Tester) ASTM D4541-22 (Method B) ASTM D7234-22	) SW, YL, JC
		2. Tensile Strength & Elongation at Break	ASTM D412-16(2021) Method A	) SW, YL, JC
		3. Crack Bridging	ASTM C836/C836M-18(2022) EL-A-OP-CMT-SIN-MD202 Issue 1 June 2023	) SW, YL, JC
		4. Water Penetration Test	EL-A-OP-CMT-SIN-MD203 Issue 1 June 2023 based on DIN 1048-5:1991	) SW, EC, JC, YL

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES		STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		5.	Initial Hardness (Shore A)	ASTM D2240-15(2021)	) SW, YL, JC
		6.	Set to touch	ASTM D1640/D1640M-14(2022)	) SW, YL, JC
D.	**7. Flexible Non-Cementitious Waterproof Membrane (Water-Based)**	1.	Tensile Pull Off Strength	ASTM D4541-02 (Method A, Type I Tester) ASTM D4541-22 (Method B) ASTM D7234-22	) SW, YL, JC
		2.	Tensile Strength & Elongation at Break	ASTM D412-16(2021) Method A	) SW , YL, JC
		3.	Crack Bridging	ASTM C836/C836M-18(2022) EL-A-OP-CMT-SIN-MD202 Issue 1 June 2023	) SW, YL, JC
		4.	Water Penetration Test	EL-A-OP-CMT-SIN-MD204 Issue 1 June 2023 based on DIN 1048-5:1991	) SW, YL, JC
		5.	Initial Hardness (Shore A)	ASTM D2240-15(2021)	) SW, YL, JC
		6.	Set to touch	ASTM D1640/D1640M-14(2022)	) SW, YL, JC
D.	**8. Waterproofing Membrane for RC Roof - Bituminous Type**	1.	Tensile pull off strength	ASTM D4541-02 (Method A, Type I Tester) ASTM D4541-22 (Method B) ASTM D7234-22	) SW, YL, JC
		2.	Tensile Strength & Elongation at Break	ASTM D412-16(2021) Method A	) SW, YL, JC
		3.	Crack Bridging	ASTM C836/C836M-18(2022) EL-A-OP-CMT-SIN-MD202 Issue 1 June 2023	) SW, YL, JC
		4.	Water Vapour Transmission	ASTM E96/E96M-24a	) SW, YL, JC
		5.	Water Penetration Test	EL-A-OP-CMT-SIN-MD205 Issue 1 June 2023 based on DIN 1048-5:1991	) SW, YL, JC
		6.	Initial Hardness (Shore A)	ASTM D2240-15(2021)	) SW, YL, JC
D.	**8. Waterproofing Membrane for RC Roof - Bituminous Type**	7.	Accelerated Weathering	ASTM G154-23 EL-A-OP-CMT-SIN-MD207 Issue 1 June 2023	) SW, YL, JC
		8.	Set to touch	ASTM D1640/D1640M-14(2022)	) SW, YL, JC

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES		STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		9.	Solid Content	SS 133: 2017(2023) Annex D Method A	) SW, YL, JC
		10.	Heat Test	SS 133: 2017(2023) Annex H	) SW, YL, JC
		11.	Water Resistance Test	SS 133: 2017(2023) Annex J	) SW, YL, JC
		12.	Direct Flame Test	SS 133: 2017(2023) Annex K	) SW, YL, JC
D.	**9. Repair Material – Reinforcement Primer / Reinforcement Bar**	1.	Half-Cell Potential	ASTM C876-22b	) SW
		2.	Bond Performance	SS 2 Part 3: 1987 Appendix A	
D.	**10. Epoxy Mortar**	1.	Working Time, Initial Setting Time and Service Strength Setting Time	ASTM C308-18(2023)	) SW
		2.	Compressive Strength	ASTM C579-23 BS 6319-2:1983	) SW
		3.	Coefficient of Linear Thermal Expansion	ASTM C531-18(2023)	) SW
		4.	Water Absorption	ASTM C413-18(2023)	) SW, EC, YL
		5.	Tensile Strength	ASTM C307-23 BS 6319-7:1985	) SW
		6.	Flexural Strength	ASTM C580-18(2023) BS 6319-3:1990	) SW
D.	**11. Epoxy Resin for Injection**	1.	Bond Strength	ASTM C882/C882M-23	) SW
		2.	Density	SS 5-B7:2013(2018) ASTM D1475-13(2025)	) SW
D.	**12. Bituminous - Waterproofing and Non-Bituminous Pre formed Membrane for Concealed Roof**	1.	Dimensional Stability	SS 374:1994(2023) Appendix A	) SW, YL, JC
		2.	Tensile Strength and Elongation at Break	SS 374:1994(2023) Appendix B	) SW, YL, JC
		3.	Tensile Shear at Joints	SS 374:1994(2023) Appendix C	) SW, YL, JC
		4.	Pliability	SS 374:1994(2023) Appendix D	) SW, YL, JC

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES		STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		5.	Water Absorption & Soluble Matter	SS 374:1994(2023) Appendix E	) SW, YL, JC
		6.	Water Vapour Transmission	SS 374:1994(2023) Appendix F	) SW, YL, JC
		7.	Hydrostatic Test	SS 374:1994(2023) Appendix G	) SW, YL, JC
		8.	Resistance to Leakage at Joint	SS 374:1994(2023) Appendix H	) SW, YL, JC
D.	**13. Waterproofing Membrane**	1.	Thickness and Mass Per Unit Area	DIN 53353:1979-12 DIN 16726:2017 BS EN 1849-1:2000 BS EN 1849-2:2019 BS EN 22286:1994 (BS 3424-1:1994) (ISO 2286:1986) ASTM D3767-03(2020)	) SW
		2.	Tensile Strength & Elongation at Break	SS 374:1994(2023) ASTM D412-16(2021) Method A	) SW, YL, JC
				BS EN 12311-1:2000 BS EN 12311-2:2013	) SW, YL, JC
				BS EN ISO 527-1:2019 BS EN ISO 527-3:2018	) SW
		3.	Dimensional Stability	SS 374:1994(2023)	) SW, YL, JC
				BS EN 1107-1:2000 BS EN 1107-2:2001 DIN 53377:2024 DIN 16726:2017	) SW
D.	**13. Waterproofing Membrane**	4.	Watertightness/Behaviour under Hydrostatic Pressure / Water Impermeability	SS 374:1994(2023) BS EN 1928:2000 DIN 16726:2017	) SW, YL, JC
				BS EN 12390-8:2019, based on BS EN 14891:2017, Part A7 for concrete mix design	) SW
		5.	Peel or Stripping Strength to Concrete	ASTM D903-98(2025)	) SW, YL, JC
		6.	Puncture Resistance	ASTM E154/E154M-08a(2025) Section 10	) SW, YL, JC

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	7. Impact Resistance	EL-A-OP-CMT-SIN-MD221 Issue 1 June 2023 ASTM G14-04(2024)	) SW, YL, JC
	8. Static Crack Bridging	ASTM C836/C836M-18(2022) ASTM C1305/C1305M-25	) SW, YL, JC
		BS EN 1062-7:2004, Method A	) SW
	9. Pull-off Adhesion Strength	ASTM D4541:2002 (Method A, Type I Tester) ASTM D4541-22 (Method B) ASTM D7234-22	) SW, YL, JC
		BS EN 1542:1999	) SW
	10. Artificial Ageing by Long Term Exposure to Elevated Temperature	BS EN 1296:2001	) SW
		SS 374:1994(2023) DIN 16726:2017	SW, YL, JC
	11. Behaviour after Storage in Aqueous Solutions	DIN 16726:2017	) SW, YL, JC
D. 13. Waterproofing Membrane	12. Chemical Resistance	BS EN 14414:2004 (Method A & B) ASTM D543-21	) SW
	13. Resistance to Leaching	BS EN 14415:2004 (Method A & B)	) SW
	14. Hydrostatic Pressure Resistance	ASTM D5385/D5385M-25	) SW, YL, JC
	15. Lateral Water Migration	EL-A-OP-CMT-SIN-MD222 Issue 1 June 2023 ASTM D5385/D5385M-25	) SW, YL, JC
	16. Tear Strength	ASTM D624-00(2020) (Type C & T)	) SW, YL, JC
	17. Resistance to Static Loading	BS EN 12730:2015 Method B	) SW
	18. Resistance Tearing	BS EN 12310-2:2018	) SW
	19. Peel Resistance of Joints	BS EN 12316-2:2013	) SW
	20. Electrical resistivity	ASTM D257-14(2021)e1	) SW

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	21. Adhesive and Cohesive Strength Between Materials in Roofing or Waterproofing Membranes and Systems	ASTM D7105/D7105M-06(2019)e1	) SW
	22. Static Puncture Resistance	ASTM D5602/D5602M-18(2022)	) SW
	23. Water Penetration	EL-A-OP-CMT-SIN-MD203A Issue 1 July 2023 based on DIN 1048-5:1991	) SW, EC, JC
	24. Length, Width and Net Mass	ISO 2286-1:2016 BS EN ISO 2286-1:2016 DIN EN ISO 2286-1:2016	) SW, YL, JC
	25. Mass per Unit Area	ISO 2286-2:2016 BS EN ISO 2286-2:2016 DIN EN ISO 2286-2:2016	) SW, YL, JC
D. 13. Waterproofing Membrane	26. Thickness	ISO 2286-3:2016 BS EN ISO 2286-3:2016 DIN EN ISO 2286-3:2017-01	) SW, YL, JC
D. 14. Rubber Waterstop	1. Change in Mass (After Immersion) Change in Volume (after immersion)	ASTM D471-16a(2021)	) SW, YL, JC
E. BUILDING MATERIAL	1. Tensile Adhesion Bond Strength	BS EN 1348:2007 BS EN 12004-2:2017	) SW, EC
E. 1. Tile Adhesive (Fast and Normal Set)	2. Tensile Adhesion Bond Strength (After Water Immersion)	BS EN 1348:2007 BS EN 12004-2:2017	) SW, EC
	3. Tensile Adhesion Bond Strength (After Heat Aging)	BS EN 1348:2007 BS EN 12004-2:2017	) SW, EC
	4. Open Time	BS EN 1346:2007 BS EN 12004-2:2017	) SW, EC
	5. Deformity	BS EN 12002:2008 BS EN 12004-2:2017	) SW, EC
	6. Slip	BS EN 1308:2007 BS EN 12004-2:2017	) SW, EC

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	7. Pull Out Test (Site Test)	EL-A-OP-CMT-SIN-MD215 Issue 1 June 2023	) AC
E. **2. Tile Grout**	1. Shrinkage	BS EN 12808-4:2009 BS EN 13888-2: 2022	) SW, EC
	2. Water Absorption	BS EN 12808-5:2008 BS EN 13888-2: 2022	) SW, EC
	3. Compressive Strength	BS EN 12808-3:2008	) SW, EC
E. **2. Tile Grout**	4. Flexural Strength	BS EN 13888-2: 2022 BS EN 12808-3:2008 BS EN 13888-2: 2022	) SW, EC
	5. Abrasion Resistance	BS EN 12808-2:2008 BS EN 13888-2: 2022	) SW, EC
E. **3. Prepacked Floor Screed/ Prepacked Waterproof Screed**	1. Average Compressive Strength	ASTM C109/C109M-26	) SW, WCK, CLW, YL, EC
	2. Flow	ASTM C1437-20	) SW, YL, EC
	3. Water Absorption	ASTM C413-18(2023)	) SW, YL, EC
	4. Water Penetration Test	EL-A-OP-CMT-SIN-MD203 Issue 1 June 2023 based on DIN 1048-5:1991	) SW, EC, JC
	5. Flexural Strength	ASTM C348-21	) SW, YL, EC
	6. Water Retentivity	BS 4551:2005+A2:2013	) SW, YL, EC
	7. Stiffening Time	BS EN 1015-9:1999 (Method A)	) SW, YL, EC
	8. Volume Change	ASTM C827/C827M-23	) SW, YL, EC
E. **4. Prepacked Prepacked Mortar Plaster/**	1. Tensile Pull Off Strength 2. Compressive Strength	BS EN 1015-12:2016 BS EN 1015-11:2019 BS 4551-1:1998	) SW, YL, EC) SW, YL, EC
	3. Consistence Retentivity	BS 4551:2005+A2:2013	) SW, YL, EC
	4. Water Retentivity	BS 4551:2005+A2:2013	) SW, YL, EC
	5. Stiffening Time	BS EN 1015-9:1999 (Method A)	) SW, YL, EC

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	6. Linear Shrinkage	ASTM C531-18(2023)	) SW, YL, EC

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	7. Pull Out Test (Site Test)	EL-A-OP-CMT-SIN-MD216 Issue 1 June 2023	) AC
	8. Modulus of Elasticity in Compression	BS EN 13412:2006 (Method 2)	) SW, WCK
	9. Flexural Strength	BS EN 1015-11:2019	) SW, YL, EC
E. 5. Prepacked Skim Coat	1. Tensile Pull Off Strength	BS EN 1015-12:2016	) SW, YL, EC
	2. Tensile Pull Off Strength (After Weathering)	BS EN 1015-12:2016 EL-A-OP-CMT-SIN-MD208 Issue 1 June 2023	) SW, YL, EC
	3. Compressive Strength	BS EN 1015-11: 2019	) SW, YL, EC
	4. Water Retentivity	BS 4551: 2005+A2: 2013	) SW, YL, EC
	5. Setting Time	BS EN 196-3:2016	) SW, YL, EC
	6. Linear Shrinkage	ASTM C531-18(2023)	) SW, YL, EC
	7. Pull Out Test (Site Test)	EL-A-OP-CMT-SIN-MD216 Issue 1 June 2023	) AC
E. 6. Acrylic Polymer Cementitious Coating	1. Compressive Strength	ASTM C109/C109M-26	) SW, WCK, CLW, YL, EC
	2. Flexural Strength	ASTM C348-21	) SW, YL, EC
	3. Tensile Strength	ASTM C307-23	) SW,
	4. UV Accelerated Weathering	ASTM G154-23 EL-A-OP-CMT-SIN-MD209 Issue 1 June 2023	) SW
	5. Skid Resistance	ASTM E303-22	) SW
	6. Taber Abrasion	ASTM D4060-25 EL-A-OP-CMT-SIN-MD212 Issue 1 July 2023	) SW
	7. Shear Bond Adhesive	ASTM C482-20 EL-A-OP-CMT-SIN-MD213 Issue 1 July 2023	) SW

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	8. Water Penetration Test	EL-A-OP-CMT-SIN-MD206 Issue 1 July 2023 based on DIN 1048-5:1991	) SW

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
E. 7. Self-Leveling Screed	1. Compressive Strength	ASTM C109/C109M-26	) SW, WCK, CLW, YL, EC
	2. Linear Shrinkage/Length Change	ASTM C157/C157M-24	) SW
		ASTM C531-18(2023)	) SW, YL, EC
	3. Slip Resistance Before & After Accelerated Weathering)	BS 7976-2:2002+A1:2013	) SW
	4. Tensile Adhesion Bond Strength	ASTM D4541-22 (Method A, Type I Tester) BS EN 13892-8:2002	) SW
	5. Shear Adhesion Bond Strength	ASTM C482-20	) SW, YL, EC
	6. Accelerated Weathering (UV Exposure)	ASTM G154-23	) SW
	7. Flowability	ASTM C939/C939M-22	) SW
	8. Water Absorption	ASTM C413-18(2023) (Method A)	) SW, YL, EC
	9. Abrasion Resistance	BS EN 13892-4:2002	) SW
E. 8. Sealant	1. Staining and Color Change	ASTM C510-16(2022)	) SW
	2. Extrusion Rate	ASTM C1183/C1183M-13(2024)	) SW
	3. Rheological (Flow) Properties	ASTM C639-24	) SW
	4. Indentation Hardness	ASTM C661-15(2022)	) SW
	5. Tack-Free Time	ASTM C679-15(2022)	) SW, YL, HC
	6. Adhesion and Cohesion Under Cyclic Movement (Hockman Cycle)	ASTM C719-22	) SW

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	7. Effects of Heat Aging	ASTM C1246-17(2022)	) SW
	8. Effects of Laboratory Accelerated Weathering	ASTM C793-23	) SW
	9. Adhesion-in-Peel	ASTM C794-18(2022)	) SW

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	10. Durability of Sealants Exposed to Continuous Immersion in Liquids	ASTM C1247-20	) SW
	11. Extrudability	ISO 8394-2: 2017	) SW
	12. Rate of Cure	BS EN 14187-1: 2017	) SW
	13. Tack Free Time	BS EN 14187-2: 2017	) SW
	14. Self-Levelling Properties	BS EN 14187-3: 2017	) SW
	15. Change in Mass and Volume	ISO 10563: 2023	) SW
	16. Change in Mass and Volume after Immersion in Test Fuels and Liquid Chemicals	BS EN 14187-4: 2017	) SW
	17. Resistance to Hydrolysis	EN 14187-5: 2019	) SW
	18. Resistance to Flame	EN 14187-7: 2019	)
	19. Adhesion/Cohesion Properties at Variable Temperatures	BS EN ISO 9047: 2003	) SW
	20. Tensile Properties at Maintained Extension	ISO 8340: 2005	) SW
	21. Elastic Recovery of Sealants	EN ISO 7389: 2003	) SW
	22. Artificial Weathering by UV- Irradiation	BS EN 14187-8: 2017	) SW
	23. Adhesion/Cohesion Properties after Immersion in Test Fuels and Liquid Chemicals	BS EN 14187-6: 2017	) SW

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	24. Resistance to Flow	ISO 7390:2002	
F. PAINT/ COATING	1. Adhesion (Pull Off) Strength	ASTM D4541-22 (Method B) ASTM D7234-22 BS EN ISO 4624:2023 (Method B) BS EN 1542:1999	) SW, AC, HC
	2. Wet Film Thickness	ISO 2808:2019 (Method 1A) SS 5-B1:2013 (2018)	) SW

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	3. Dry Film Thickness	ISO 2808:2019 (Method 4A, 6A, 7B2, 7C & 10) ASTM D7091-22 ASTM D6132-13(2022) SS 5-B1:2013 (2018) BS EN ISO 2178:2016 BS EN ISO 2178:2016	) AC, SW
	4. Alkali Resistance (Spotting Method)	SS 5-G2:2003(2013)	) SW
	5. Compatibility on Wet Concrete	BS EN 13578:2003	) SW
	6. Conditioning Before Testing – UV Accelerated Weathering	BS EN 1062-11:2007 ISO 11507:2007 ISO 16474-3:2021	) SW
	7. Static Crack Bridging	BS EN 1062-7:2004 Method A	) SW, HC
	8. Tensile & Elongation at Break	BS ISO 37:2024	) SW, HC
	9. Water-Vapour Transmission	BS EN ISO 7783:2018 ASTM D1653-13(2021)	) SW) SW, YL, HC
	10. Luminance Factor	SS 589: 2013(2022)+C1:2022 (BS EN 1871:2020Annex F)	) SW
	11. Skid Resistance	SS 589: 2013(2022)+C1:2022 Annex C	) SW
	12. Flow Resistance	SS 589: 2013(2022)+C1:2022 Annex B	) SW
F. PAINT/ COATING	13. Softening Point	SS 589: 2013(2022)+C1:2022 (BS EN 1871:2020 Annex G)	) SW

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	14. Heat stability	SS 589: 2013(2022)+C1:2022 (BS EN 1871:2020 Annex H)	) SW
	15. Rating Adhesion by Tape Test / Adhesion (X-cut)	ASTM D3359-23 SS 579:2015 Clause 7.1.6	) SW, YL, HC
	16. Carbon Dioxide Permeability	BS EN 1062-6:2002 (Method A)	) SW
	17. Gloss Value at 20°, 60° and 85°	ISO 2813:2014 SS 5-E1:2020	) SW

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	18. Visual Comparison of Colour of paints	ISO 3668:2017 SS 5-E3:2019	) SW
	19. Pencil Hardness Test	ASTM D3363-22	) SW
	20. Scratch Resistance Test	SS 5-F2:2013 (2018)	) SW
	21. Resistance to Salt Spray	SS 5-G10:2020	) SW
	22. Resistance to Humidity	SS 5-G7:2020	) SW
	23. Resistance to Hydrostatic Pressure used in Below Grade Applications Applied to Masonry	ASTM D7088-17 (2023)	) SW, WCK, CLW
	24. Exposure to Laboratory Light Sources	SS 5-G11:2020 SS 5-G12:2020	) SW
	25. Non-volatile Matter Content	SS 5-B2:2013(2018) BS EN ISO 3251:2019	) SW, YL, HC
	26. Consistency (Stormer Viscometer)	SS 5-B12:2013(2018) – Method B ASTM D562-10(2023) – Method B	) SW, YL, HC
	27. Density	SS 5-B7:2013(2018)+A1:2018 BS EN ISO 2811-1:2023	) SW, YL, HC
	28. Brushing Properties	SS 5-B9:2003(2013)	) SW, YL, HC
	29. Condition in Container	SS 5-B4:2003(2013)	) SW, YL, HC
	30. Fineness of Grind	SS 5-B13:2018	) SW, YL, HC

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	31. Set-to-touch, Tack-Free, Hard-drying, and Through-dry Time	SS 5-D6:2020 Method A	) SW, YL, HC
	32. Roller-coating Properties	SS 150:2021+A1:2024 Clause 6.4.3.2 SS 345:2015+A1:2021 Clause 5.4.3.2 SS 500:2015+A1:2021 Clause 6.4.3.2 SS 579:2015 Clause 6.4.3.2 SS 678:2021+C1:2022 Clause 6.4.3.2	) SW, YL, HC

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	33. Sealing Properties and Efflorescence	SS 579:2015 Annex B SS 500:2015+A1:2021 Annex B	) SW, YL, HC
	34. Scrub Resistance	SS 5-F6:2014(2020) BS EN ISO 11998:2006 ASTM D2486-17(2025)	) SW, YL, HC
	35. Dirt Pick Up Resistance (DPUR)	SS 678:2021+C1:2022 Clause 6.5.4 ASTM D3719-00	) SW, YL, HC
	36. Elongation at Break & Tensile Strength	ASTM D412-16(2021) Method A	) SW, YL, HC
	37. Natural Weathering	ASTM D1014-25 ASTM D3719-00 ASTM D610-25	) SW, YL, HC
	38. Opacity (Contrast Ratio)	SS 5-E2:2013(2018)	) SW, YL, HC
	39. Water Absorption	SS 500:2015+A1:2021 Annex A	) SW, YL, HC
	40. Water Resistance	BS EN ISO 2812-2:2018	) SW, YL, HC
G. ADMIXTURES	1. Water Reduction	BS EN 12350-2:2019 BS EN 480-1:2023 SS EN 934-2:2015	) SW, WCK
	2. Compressive Strength	BS EN 12390-3:2019 BS EN 480-1:2023 SS EN 934-2:2015	) SW, WCK

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	3. Air Content-Pressure Methods	BS EN 12350-7:2019 BS EN 480-1:2023 SS EN 934-2:2015	) SW, WCK
	4. Increase in Consistence	BS EN 12350-2:2019 BS EN 480-1:2023 SS EN 934-2:2015	) SW, WCK
	5. Retention of Consistence	BS EN 12350-2:2019 BS EN 480-1:2023 SS EN 934-2:2015	) SW, WCK
	6. Bleeding	BS EN 480-4:2005 BS EN 480-1:2023 SS EN 934-2:2015	) SW, WCK
	7. Setting Time	BS EN 480-2:2006 SS EN 934-2:2015	) SW, WCK

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	8. Capillary Absorption	BS EN 480-5:2005 SS EN 934-2:2015	) SW
	9. Sampling	BS EN 934-6:2019 SS EN 934-6:2008 (2015)	) SW, WCK
	10. Effect on Corrosion Susceptibility of Reinforcing Steel by Potentiostatic Electro-Chemical Test	BS EN 480-14: 2006	) SW, WCK
H. CEMENT **1. Ordinary Portland Cement/ Sulphate-resisting and Portland Blast Cement. Ground Granulated Blast Furnace Slag, Silica Fume**	1. Strength	BS EN 196-1:2016	) SW, WCK, WYC
		ASTM C109/C109M-26	) SW, WCK, CLW, WYC
		SS 397 Part 1: 1997	) SW, WCK
	2. Setting Times	BS EN 196-3:2016 ASTM C191-26	) SW, WCK, WYC
		SS 397-3:1997	) SW, WCK
	3. Soundness	BS EN 196-3:2016	) SW, WCK, WYC
		SS 397-3:1997	) SW, WCK

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	4. Fineness	BS EN 196-6:2018	) SW, WCK, WYC
		ASTM C204-26	) SW, WCK, WYC
		SS 397-6:1997	) SW, WCK
	5. Moisture Content	BS EN 15167-1:2006 Annex A SS EN 15167-1:2008(2016) Annex A ASTM C311/C311M-25	) SW, WCK, WYC
	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	) SW, WCK, WYC
	7. Air Content	ASTM C185-20	) SW, WCK, WYC

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	8. Amount of Water Required for Normal Consistency	ASTM C187-25	) SW, WCK, WYC
	9. Fineness by Wet Sieving	BS EN 451-2:2017 ASTM C430-26	) SW, WCK, WYC
	10. Water Requirement for Category S Fly Ash	BS EN 450-1:2012, Annex B	) SW, WCK, WYC
	11. Potential Expansion of Portland-Cement Mortars Exposed to Sulfate	ASTM C452/C452M-25	) SW
H. 2. Masonry	1. Setting Time	BS EN 413-2:2016 BS EN 196-3:2016	) SW
	2. Soundness	BS EN 196-3:2016	) SW
	3. Compressive Strength	BS EN 196-1:2016	) SW
	4. Consistence of Fresh Mortar	BS EN 413-2:2016	) SW
	5. Air Content	BS EN 413-2:2016	) SW
	6. Water Retentivity	BS EN 413-2:2016	) SW

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	7. Sieve Residue	BS EN 196-6:2018	) SW
I. CURING COMPOUND	1. Water Retention	ASTM C156-25	) SW
	2. Bond Strength Test	ASTM C882/C882M-23 Clause 11.3 EL-A-OP-CMT-SIN-MD219 Issue 1 June 2023	) SW
	3. Density Test	ASTM D1475-13(2025)	) SW
	4. Non-Volatile Matter Test	ASTM D1644-01(2023) (Method A & B)	) SW
	5. Volatile Content	ASTM D2369-24	) SW
	6. Curing Efficiency Index	BS 7542:1992	) SW
J. MASONRY UNITS **1. Ferrocement Roof Slabs / Sunbreaker Slabs**	1. Dimension and Density	BS EN 12390-7:2019	) SW
	2. Cover Measurement	BS 1881-204:1988	) SW
	3. Initial Surface Absorption	BS 1881-208:1996	) SW

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	4. Carbonation Depth	BRE Publication (IP6/81) BS EN 14630:2006	) SW
J. 2. Burnt Clay and Shale Bricks	1. Dimensions	SS 103:1974	) SW
	2. Compressive Strength	SS 103:1974	) SW
	3. Water Absorption Test	SS 103:1974	) SW
	4. Soluble Salt Content	SS 103:1974	) SW
	5. Efflorescence Test	SS 103:1974	) SW
	6. Double Punch Test	EL-A-OP-CMT-SIN-MD285 Issue 1 September 2024	) SW, WCK, CLW
J. 3. Masonry Units /Autoclaved Aerated Concrete	1. Compressive Strength	BS EN 772-1:2011+A1:2015 ASTM C1693-11(2025), Section 6	) SW
	2. Density	BS EN 772-13: 2000 BS EN 678:1994 ASTM C1693-11(2025) Section 7	) SW

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	3. Drying Shrinkage	BS EN 680:2005 ASTM C1693-11(2025) Section 8	) SW
	4. Water Absorption Due to Capillary Action	BS EN 772-11:2011	) SW
	5. Dimensions	BS EN 772-16: 2011	) SW
H. 4. Concrete Masonry Units	1. Geometrical Characteristics	SS 271:1983	) SW
	2. Compressive Strength	SS 271:1983	) SW
	3. Drying Shrinkage	SS 271:1983	) SW
	4. Total Water Absorption	SS 271: 1983	) SW
	5. Measurement of Dimensions	ASTM C140/C140M-26	) SW
	6. Compressive Strength	ASTM C140/C140M-26	) SW
	7. Absorption	ASTM C140/C140M-26	) SW
K. CERAMIC WALL AND FLOOR TILES	1. Dimensions	SS 483: 2000 BS ISO 13006:2018 (BS EN 14411:2016) BS EN ISO 10545-2:2018	) SW, YL, EC

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	2. Straightness of Side	SS 483: 2000 BS ISO 13006:2018 (BS EN 14411:2016) BS EN ISO 10545-2:2018	) SW, YL, EC
	3. Rectangularity	SS 483: 2000 BS ISO 13006:2018 (BS EN 14411:2016) BS EN ISO 10545-2:2018	) SW, YL, EC
	4. Surface Flatness	SS 483: 2000 BS ISO 13006:2018 (BS EN 14411:2016) BS EN ISO 10545-2:2018	) SW, YL, EC
	5. Surface Quality	SS 483: 2000 BS ISO 13006:2018 (BS EN 14411:2016) BS EN ISO 10545-2:2018	) SW, YL, EC

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	6. Resistance to Deep Abrasion	(SS 483: 2000) BS ISO 13006:2018 (BS EN 14411:2016) ISO 10545-6:2010	) SW, YL, EC
K. CERAMIC WALL AND FLOOR TILES	7. Tensile and Shear Adhesion Bond Strength	ASTM C482-20	) SW, YL, EC
	8. Modulus of Rupture	(SS 483: 2000) BS ISO 13006:2018 (BS EN 14411:2016) ISO 10545-4:2019	) SW, YL, EC
	9. Water Absorption/Apparent Porosity/Apparent Relative Density/Bulk Density	(SS 483: 2000) BS ISO 13006:2018 (BS EN 14411:2016) ISO 10545-3:2018	) SW, YL, EC
	10. Scratch Hardness of Surface	EN 101:1991 BS 6431-13:1986 SS 301: 1985 Appendix G	) SW, YL, EC
		EN 159:1991	) SW
	11. Slip Resistance Test	(SS 483: 2000) BS ISO 13006:2018	) SW, YL, EC
		SS 485:2022 AS 4856:2013 Appendix A (BS EN 14411:2016)	) SW, AC, YL, EC

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	12. Reverse Staining	EL-A-OP-CMT-SIN-MD214 Issue 1 June 2023	) SW, YL, EC
	13. Stain Resistance	(SS 483: 2000) BS ISO 13006:2018 (BS EN 14411:2016) SS 57:1989 Appendix H.7 ISO 10545-14:2015	) SW, YL, EC
	14. Chemical Resistance	(SS 483: 2000) BS ISO 13006:2018 (BS EN 14411:2016) ISO 10545-13:2016	) SW, YL, EC
	15. Coefficient of Friction	SS 485:2022 AS 4856:2013 Appendix B	) SW, YL, EC

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	16. Sampling and Basic for Acceptance	(SS 483: 2000) BS ISO 13006:2018 (BS EN 14411:2016) ISO 10545-1:2014	) SW, YL, EC
	17. Colourfastness	SS 57: 1989 Appendix F SS 301: 1985 Appendix H	) SW, YL, EC
L. ROCKS	1. Unconfined Compressive Strength of Core Specimens	ASTM D7012-23 Method C	) SW, ZMM
	2. Water (Moisture) Content of Soil and Rock	ASTM D2216-19	) SW, ZMM
	3. Point Load Strength Index	ASTM D5731-16 ISRM Suggested Method - 1978	) SW, ZMM
	4. Petrographic Description of Rocks	ISRM Suggested Method - 1978	) SW, JAA
	5. Particle Size Distribution	BS EN 13383-2:2019	) SW, ZMM
	6. Length-to-Thickness Ratio (Elongation)	BS EN 13383-2:2019	) SW, ZMM
	7. Particle Density & Water Absorption	BS EN 13383-2:2019	) SW, ZMM
	8. Block Integrity - Drop Test	BS EN 13383-1:2013 Annex C	) SW, ZMM
	9. Slakes Durability of Shales and Other Similar Weak Rocks	ASTM D4644-16	) SW, ZMM, WH

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	10. Indirect Tensile Brazil Test	ISRM (Blue Book) Part 2	) SW, ZMM, WH
	11. Splitting Tensile Strength of Intact Rock Core Specimens with Flat Loading Platens	ASTM D3967-23	) SW, ZMM, WH
M. NATURAL STONE / GRANITE	1. Water Absorption and Bulk Specific Gravity	ASTM C97/C97M-25	) SW, ZMM
	2. Compressive Strength	ASTM C170/C170M-24a BS EN 1926:2006, Annex A	) SW, ZMM

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES		STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		3.	Petrographic Examination	BS EN 12407:2019 BS EN 12670:2019	) SW, JAA
		4.	Modulus of Rupture	ASTM C99/C99M-25	) SW
		5.	Flexural Strength	ASTM C880/C880M-25	) SW
N.	**STRUCTURAL FIXINGS**	1.	Tensile Strength (Pull Out Strength) of Structural Fixings in Concrete and Masonry	BS 5080-1:1993 BS 8539:2012+A1:2021 Annex B Clause 9.3	) AC
		2.	Allowable Resistance of Structural Fixings in Concrete or Masonry	BS 8539:2012+A1:2021 Annex B Clause 9.2	) AC
		3.	Proof Load Test for Pullout Resistance of Fastening Systems for Railway Applications	BS EN 13146-10 2017	) AC
O.	**BITUMINUOUS PREMIXES**	1.	Bitumen Content	ASTM D2172/D2172M-26	) SW
		2.	Density of Premix on Cored Samples	BS 598-104:2005	) SW, AA
		3.	Density of Cored Premix with Sample Preparation	BS 598-104:2005	) SW, AA
		4.	Marshall Density	BS 598-107:2004 ASTM D1559-89	) SW, AA
		5.	Marshall Stability	BS 598-107:2004 ASTM D1559-89 ASTM D6927-22	) SW, AA

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES		STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	6.	Particle Size Distribution	BS 812-103.1:1985	) SW, AA
	7.	Percentage Voids Density of Core Method	BS 598-104:2005	) SW, AA
	8.	Thickness of Core	ASTM D3549/D3549M-18 (2023) (Method A) BS EN 12697-36:2022	) SW, AA
	9.	Asphalt Content by Ignition	ASTM D6307-19	) SW, AA

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		Method		
O. BITUMINUOUS PREMIXES	10.	Los Angeles Abrasion	BS EN 12697-17: 2017	) SW, AA
	11.	Measuring Surface Frictional Properties Using the British Pendulum Tester	ASTM E303-22 SS 589-2013:2022 BS EN 1436:2018 BS EN 13036-4:2011	) AC
	12.	Measuring Pavement Macrotexture Depth Using a Volumetric Technique	ASTM E965-15(2024) BS EN 13036-1:2010	) AC
	13.	Preparation of Asphalt Mixture Specimens Using Marshall Apparatus	ASTM D6926-20	) SW, AA
	14.	Mechanical Size Analysis of Extracted Aggregate	ASTM D5444-24	) SW, AA
	15.	Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures	ASTM D2726/D2726M-26	) SW, AA
	16.	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures	ASTM D3203-22	) SW, AA
	17.	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures	ASTM D2041/D2041M-26	) SW, AA
	18.	Effect of Moisture on Asphalt Concrete Paving Mixtures	ASTM D4867/D4867M-26	) SW,
	19.	Wheel- Tracking Rate and Depth	BS 598-110:1998 BS EN 12697-22:2020+ A1:2023	) SW,

MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	20.	Density of Bituminous Concrete in Place by Nuclear Methods	ASTM D2950/D2950M-22	) SW, AC
	21.	Deflections (Light Weight Deflectometer)	ASTM E2583-07(2025)	) SW, AC

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES		STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
P.	**PRECAST CONCRETE UNITS**				
	1. Concrete Paving Blocks	1.	Compressive Strength	BS EN 1338:2003	) SW
		2.	Visual Aspects and Appearance (Annex J)	BS EN 1338:2003	) SW
		3.	Shape and Dimensions, Thickness of Facing Layer (Annex C)	BS EN 1338:2003	) SW
		4.	Tensile Splitting Strength (Annex F)	BS EN 1338:2003	) SW
		5.	Slip/Skid Resistance (USRV) (Annex I)	BS EN 1338:2003	) SW
		6.	Total Water Absorption (Annex E)	BS EN 1338:2003	) SW
P.	**2. Concrete Kerb, Channel**	1.	Water Absorption	SS 214:2022 BS 7263-1:1994 BS 7263-1:2001	) SW, WCK
		2.	Transverse Strength	SS 214:2022 BS 7263-1:1994 BS 7263-1:2001	) SW, WCK
P.	**3. Slab (Aeration/ Porous)**	1.	Water Absorption	BS 7263-1:1994 BS 7263-1:2001	) SW
		2.	Transverse Strength	BS 7263-1:1994 BS 7263-1:2001	) SW
P.	**4. Concrete Paving Flags**	1.	Visual Aspects and Appearance (Annex J)	BS EN 1339:2003	) SW
		2.	Bending Strength and Breaking Load (Annex F)	BS EN 1339:2003	) SW
		3.	Slip/Skid Resistance (USRV) (Annex I)	BS EN 1339:2003	) SW

MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES		STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		4.	Total Water Absorption (Annex E)	BS EN 1339:2003	) SW
P.	**5. Concrete Kerb**	1.	Visual Aspects and	BS EN 1340:2003	) SW

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
Units		Appearance (Annex J)		
	2.	Shape and Dimensions, Thickness of Facing Layer (Annex C)	BS EN 1340:2003	) SW
	3.	Bending Strength (Annex F)	BS EN 1340:2003 BS EN 1340:2003	) SW
	4.	Slip/Skid Resistance (USRV) (Annex I)	BS EN 1340:2003	) SW
	5.	Total Water Absorption (Annex E)	BS EN 1340:2003	) SW
P. 6. Clay Pavers	1.	Shape and Dimensions (Annex B)	BS EN 1344:2013	) SW
	2.	Transverse Breaking Load (Annex D)	BS EN 1344:2013	) SW
	3.	Abrasion Resistance (Annex E)	BS EN 1344:2013	) SW
	4.	Slip/Skid Resistance (USRV)	BS EN 1344:2013	) SW
Q. GROUTS		Specification BS EN 12715: 2020		
1. Geotechnical Grouting	1.	Bleeding	BS EN 12715:2020 ASTM C940-22	) SW
	2.	Setting Time	BS EN 196-3:2016	) SW
	3.	Density by Mud Balance	BS EN ISO 10414-1:2008	) SW
	4.	Marsh Cone Viscosity	BS EN 14117:2004	) SW
	5.	Viscosity & Yield Strength	BS EN ISO 10414-1:2008	) SW
	6.	Workability by Abraham Cone	BS EN 12350-8:2019	) SW
	7.	Penetrability by Filter Pump	BS EN 14497:2004	) SW
	8.	Compressive Strength	BS 1377-7:1990 Section 7 BS 1377-2:2022 Section 27 (Load Frame Method)	) SW

MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
Q. 2. Prestressing Tendons	1.	Sieve Test	BS EN 445:2007 Clause 4.2	) SW

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES		STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		2.	Fluidity Test - Cone Method	BS EN 445:2007 Clause 4.3.1	) SW
		3.	Fluidity Test - Grout Spread	BS EN 445:2007 Clause 4.3.2	) SW
		4.	Volume Change and Bleeding Measurement - Wick-Induced Test	BS EN 445:2007 Clause 4.5	) SW
		5.	Compressive Strength	BS EN 445:2007 Clause 4.6	) SW
		6.	Setting Time	BS EN 196-3:2016	)
		7.	Density	BS EN 445:2007 Clause 4.7	)
R.	**SOIL-CEMENT MIXTURE (CEMENT TREATED BASE)**	1.	Wetting and Drying Compacted Soil-Cement Mixtures	ASTM D559/D559M-15(2023)	) SW
		2.	Moisture-Density (Unit Weight) Relations of Soil-Cement Mixtures	ASTM D558/D558M-19	) SW
		3.	Compressive Strength of Molded Soil-Cement Cylinders	ASTM D1633-17	) SW, WH
		4.	Measuring Thickness of Concrete Element Using Drilled Concrete Cores	ASTM C174/C174M-25	) SW
		5.	Short-Term Unconfined Compressive Strength Index of Chemically Grouted Soils	ASTM D4219-22	) SW, WH
S.	**RESILIENT FLOOR COVERINGS**	1.	Side Length, Edge, Straightness and Squareness of Tiles	BS EN ISO 24342:2024	) SW
		2.	Overall Thickness	BS EN ISO 24346:2012	) SW
		3.	Thickness of Layers	BS EN ISO 24340:2012	) SW
		4.	Mass per Unit Area	BS EN ISO 23997:2012	) SW
		5.	Flexibility and Deflection	BS EN ISO 24344:2012 (Method A)	) SW

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
	6.	Wear Resistance. Frick-Taber Test	BS EN 660-2:1999	) SW
	7.	Slip Resistance (Dry Floor Friction & Wet Pendulum Test Methods)	SS 485:2022 AS 4856:2013	) SW, AC
	8.	Staining and Resistance to Chemicals	BS EN ISO 26987:2012	) SW
	9.	Castor chair test	ISO 4918:2016	) SW
	10.	Resistance to burning Cigarettes	EN 1399:1997 (Method B)	) SW
T. DRY WALL	1.	Partition Wall Stiffness (Annex A)	SS 492:2001(2014)	) SW
	2.	Surface Damage by Small Hard Body Impact (Annex B)	SS 492:2001(2014) BS 5234-2:1992	) SW
	3.	Resistance to Damage by Impact from a Large Soft Body (Annex C)	SS 492:2001(2014) BS 5234-2:1992	) SW
	4.	Resistance to Perforation by Small Hard Body Impact (Annex D)	SS 492:2001(2014) BS 5234-2:1992	) SW
	5.	Resistance to Structural Damage by Multiple Impacts from A Large Soft Body (Annex E)	SS 492:2001(2014) BS 5234-2:1992	) SW
	6.	Effects of Door Slamming (Annex F)	SS 492:2001(2014) BS 5234-2:1992	) SW
	7.	Resistance to Crowd Pressure (Annex G)	SS 492:2001(2014) BS 5234-2:1992	)
	8.	Lightweight Anchorage Pull Out Test (Annex H)	SS 492:2001(2014) BS 5234-2:1992	) SW
	9.	Lightweight Anchorage Pull Down Test (Annex J)	SS 492:2001(2014) BS 5234-2:1992	) SW

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MATERIALS / PRODUCTS TESTED		TESTS / PROPERTIES		STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		10.	Heavyweight Anchorage (Wash Basin) Eccentric Downward Loading Test (Annex K)	SS 492:2001(2014) BS 5234-2:1992	) SW
		11.	Heavyweight Anchorage (High Level Wall Cupboard) Eccentric Downward Loading Test (Annex L)	SS 492:2001(2014) BS 5234-2:1992	) SW
		12.	Surface & Total Water Absorption	BS EN 520:2004+A1:2009 Clause 5.9	) SW
		13.	Moisture Movement	ASTM C1185-23 Clause 8 BS EN 12467:2012+A2:2018 Annex C	) SW
		14.	Water Impermeability	BS EN 12467:2012+A2:2018 Clause 7.3.3	) SW
		15.	Flexural Breaking Load	BS EN 520:2004+A1:2009 Clause 5.7	) SW
U.	**WINDOWS & CURTAIN WALLS**	1.	Field watertightness test	BCA Conquas 21: 2017, Appendix 2 Part 5 Item 2. SS CP 96:2002(2011) Clause 4.3a	) AC
V.	**RUBBER GASKET**	1.	Water Absorption	ASTM D1056-20	) SW
		2.	Compression Deflection	ASTM D1056-20	) SW
		3.	Oven Aged Compression Deflection	ASTM D1056-20	) SW
		4.	Compression Set	ASTM D1056-20	) SW
W.	**BUILDING ENVELOPES**	1.	Infrared Thermography	ISO 6781:1983 BS EN 13187:1999	) SW, AC

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Approved Signatories

SW	:	Ms Sherly Wijaya
WCK	:	Mr Wee Chip Kai
AC	:	Mr Chuo Chung Hai (Alex)
FN	:	Mr Fairuz Nabilah Binte Muzafar
JAA	:	Mr Jayaram Jayasree Arul Aravind Baba
EC	:	Mr Chuo Chung Sam (Eric)
JC	:	Mr Chng Cheow Chea (Jiro)
CLW	:	Mr Chan Lee Wei
AA	:	Mr Azreen Azuan
ZMM	:	Ms Zin Mar Myo
WYC	:	Mr Wang Yuchen
YL	:	Dr Yohannes Lim
HC	:	Mr Hokie Christian
WH	:	Mr Win Htet
MB	:	Mr Mani Bharath
MZ	:	Mr Myo Zaw Oo
JG	:	Ms Jeneiliza Gayoba

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Note :

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025:2017. A laboratory's fulfilment of the requirements of ISO/IEC 17025:2017 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 17025:2017 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001.

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