

Schedule

Element Construction Testing (S) Pte. Ltd.
58 Sungei Kadut Loop
Singapore 729501

Certificate No. : LA-2008-0422-B
Issue No. : 20
Date : 2 January 2024
Expiry of Certificate : 11 September 2026
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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 C1260-22)
	3. Particle Size Distribution / Sieve Analysis	SS 73:1974 ASTM C136/C136M-19 BS 812-103.1:1985 BS EN 933-1:2012 ASTM D546-17 (ASTM D242/D242M-19)	) SW, MAT)))))
	4. Fineness Modulus	ASTM C136/C136M-19)
	5. Clay, Silt and Dust (Decantation Method)	SS 73:1974 (Except Method A) BS 812-103.1:1985 ASTM C117-17 BS EN 933-1:2012)))))
	6. Moisture Content (Oven Dried Method)	SS 73:1974 BS 812-109:1990 BS EN 1097-5:2008)))
	7. Bulk Density	BS EN 1097-3:1998 BS 812-2:1995 SS 73:1974) SW, MAT)))

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A. AGGREGATE	8. Relative Density & Water Absorption	BS EN 1097-6:2022 BS 812-2:1995 SS 73:1974 ASTM C127-15 ASTM C128-22 (Gravimetric Method)))))))
	9. Sampling	BS EN 932-1:1997 BS 812-102:1989 SS 73:1974	) SW))
	10. Organic Impurities	ASTM C40/C40M-20 SS 73:1974	) SW, MAT)
	11. Shell Content	SS 73 Part 6:1992 BS 812-106:1985 BS EN 933-7:1998)))
	12. Flakiness Index	SS 73 Part 5.1:1992 BS EN 933-3:2012 BS 812-105.1:1989)))
	13. Elongation Index	SS 73:1974 BS 812-105.2:1990))
	14. Impact Value	SS 73: 1974 BS 812-112:1990))
	15. Crushing Value	SS 73: 1974 BS 812-110:1990))
	16. 10% Fines Value	SS 73: 1974 BS 812-111:1990))
	17. Los Angeles Abrasion	SS 73: 1974 ASTM C131/C131M-20 BS EN 1097-2:2020 ASTM C535-16))))
	18. Soundness Test	ASTM C88/C88M-18 BS 812-121:1989 BS EN 1367-2:2009 SS 73 Part 21:1992)))))
	19. Shape & Surface Texture	SS 73: 1974)))

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A. AGGREGATE	20. Drying Shrinkage	SS 73 Part 20:1992 BS EN 1367-4:2008 BS 812-120:1995)))
	21. Assessment of Fines - Methylene Blue Test	BS EN 933-9:2022	) SW, MAT
	22. Shape Index	BS EN 933-4:2008	) SW, MAT
	23. Angularity Number	SS 73:1974)
	24. Assessment of Fines - Sand Equivalent Test	BS EN 933-8:2012+A1:2015 ASTM D2419-22	) SW, MAT)
	25. Constituents of Coarse Recycled Aggregates	BS EN 933-11:2009 SS 544: Part 2:2019+A1:2021)))
	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 : 2.02ED 2008(R2014)	) SW, MAT))
	28. Aggregate Abrasion Value	BS 812-113:1990 BS EN 1097-8:2020	) SW))
	29. Influence of Recycled Aggregate Extract on the Initial Setting Time of Cement	BS EN 1744-6:2006)
	30. Percentage of Fractured Particles in Coarse Aggregate	ASTM D5821-13(2017))))
	31. Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate	ASTM D4791-19))
	32. Clay Lumps and Friable Particles in Aggregates	ASTM C142/C142M-17)
33. Polished Stone Value	BS EN 1097-8:2020 BS 812-114:1989))	

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B. SOIL	34. Lightweight Particles in Aggregate	ASTM C123/C123M-14) SW, MAT
	35. Particle Density of Filler	BS EN 1097-7:2022)
	36. Potential Alkali Reactivity of Aggregates and Effectiveness of ASR Mitigation Measures (Miniature Concrete Prism Test. MCPT)	AASHTO T 380-22	SW, JAA
	37. Length Change of Concrete Due to Alkali-Carbonate Rock Reaction	ASTM C1105-8a)
	38. Determination of Length of Change Due to Alkali-Silica Reaction	ASTM C1293-20a)
	1. Direct Shear Box Test	BS 1377-2:2022 (Section 25) BS EN ISO 17892-10:2018	) SW, MAT)
	2. Compaction Test (Maximum and Minimum Dry Density)	BS 1377-2:2022 (Section 12))
	3. Compaction Test (Dry Density /Moisture Content)	BS 1377-2:2022 (Section 11) ASTM D1557-12(2021) ASTM D698-12(2021) AASHTO T180-22 AASHTO T99-22	) SW, MAT))))))))
	4. Unconfined Compressive Strength	BS 1377-2:2022 (Section 27) ASTM D2166/D2166M-16 BS EN ISO 17892-7:2018)))
	5. Moisture Content	BS 1377-2:2022 BS EN ISO 17892-1:2014 +A1:2022 ASTM D2216-19 ASTM D4944-18 ASTM D4959-16 ASTM D4643-17))))))))

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B. SOIL	6. Liquid Limit	BS 1377-2:2022, Section 5 ASTM D4318-17e1 ISO 17892-12:2018 +A1:2021 +A2:2022 BS EN ISO 17892-12:2018 +A2:2022)))))	
	7. Plastic Limit & Plasticity Index	BS 1377-2:2022, Section 6 ASTM D4318-17e1 ISO 17892-12:2018 +A1:2021 +A2:2022 BS EN ISO 17892-12: 2018 +A2:2022)))))	
	8. Linear Shrinkage	BS 1377-2:2022, Section 7))	
	9. Particle Size Distribution	BS 1377-2:2022, Section 10 Method 9.2, 9.3 & 9.5 BS EN ISO 17892-4:2016))))	
	10. California Bearing Ratio	BS 1377-2:2022, Section 15 ASTM D1883-21))	
	11. Particle Density	BS 1377-2:2022, Section 9 BS EN ISO 17892-3:2015)))	
	12. Percentage of Fines (Finer than 75micron)	ASTM D1140-17))	SW, MAT
	13. Sand Replacement	BS 1377-9:1990, Method 2.1 & 2.2 ASTM D1556/D1556M-15e1 & ASTM D4944-18)))))	SW, AC, MAT
	14. In-place Density & Water Content (NDG)	ASTM D6938-23 ASTM D2922-05 ASTM D3017-05 BS 1377-9:1990 Clause 2.5))))))	
	15. Plate Loading Test	BS 1377-9:1990 Method 4.1))	AC
	16. Density	BS 1377-2:2022, Section 8 BS EN ISO 17892-2:2014))	SW, MAT

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B. SOIL	17. Permeability in Triaxial Cell	BS 1377-2:2022 (Section 23) BS EN ISO 17892-11:2019) SW))
	18. Unconsolidated Undrained Triaxial (UU)	BS 1377-2:2022 (Section 28) BS EN ISO 17892-8:2018 ASTM D2850-23))))
	19. Consolidated Undrained Triaxial (CU)	BS 1377-2:2022 (Section 29) BS EN ISO 17892-9:2018 ASTM D4767-11 (2020)))))
	20. Consolidated Drained Triaxial (CD)	BS 1377-2:2022 (Section 30) BS EN ISO 17892-9:2018 ASTM D7181-20))))
	21. Oedometer (One-Dimensional Consolidation)	BS 1377-2:2022 (Section 16) BS EN ISO 17892-5:2017 ASTM D2435/D2435M-11(2020)))))
	22. Falling Head Permeability	KH. Head Vol. 2 BS EN ISO 17892-11:2019))
	23. Bentonite content in soil	EL-A-OP-CMT-SIN-MD224 Issue 1 July 2023	) SW, MAT
	24. Soil Resistivity Using the Wenner Four-Electrode Method	ASTM G57-20 (BS EN IEC 62561-7:2018)	) SW))
	25. Corrosion Rates by Potentiodynamic Polarization Resistance Measurements	ASTM G59-23 ASTM G102-23 (BS EN IEC 62561-7:2018))))
	26. Constant Head Permeability	BS 1377-2:2022 (Section 23) KH. Head Vol. 2 BS EN ISO 17892-11:2019	) SW, MAT)
27. Redox potential	BS 1377-3: 2018 +A1 2021 Clause 14	) SW	
C. CONCRETE 1. Fresh Concrete	1. Slump Test	SS 78: Pt A2: 1987 BS 1881-102:1983 BS EN 12350-2:2019) SW, WCK))

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C. CONCRETE	2. Density (Fresh Concrete)	SS 78: Pt A7: 1987 BS 1881-107:1983 BS EN 12350-6:2019)))
	3. Sampling	BS EN 12350-1: 2019 SS 78 Part A1:1987 BS 1881-101:1983)))
	4. Air Content-Pressure Methods	BS EN 12350-7: 2019 SS 78 Part A6: 1987 BS 1881-106:1983)))
	5. Flow Table Test	SS 78: Pt A5: 1987 BS 1881-105:1984 BS EN 12350-5:2019)))
	6. Degree of Compactibility	BS EN 12350-4:2019))
	7. Laboratory Mixing and Sampling	SS 78: Pt 25: 1987 BS 1881-125:2013 BS EN 480-1:2014)))
	8. Time of Setting of Concrete Mixtures by Penetration Resistance	ASTM C403/C403M-23)))
	9. Slump-flow test	BS EN 12350-8:2019))
	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))
	14. Adiabatic Temperature Rise of Fresh Concrete	EL-A-OP-CMT-SIN-MD223 Issue 1 July 2023))
	1. Fresh Concrete		
2. Hardened Concrete (Physical Tests)	1. Petrographic Examination of Hardened Concrete/ Masonry Mortar	ASTM C856-20 ASTM C1324-20a	) SW, JAA
	2. Procedure and Terminology for the Petrographic examination of hardened concrete	BS 1881-211:2016)

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	3. Density (Hardened Concrete)	SS 78: Pt A14: 1987 BS 1881-114:1983 BS EN 12390-7:2019) SW,) WCK, FN))
	4. Compressive Strength of Cubes	SS 78: Pt A16: 1987 BS 1881-116:1983 BS EN 12390-3:2019 AS 1012.9:2014))))))
	5. Water Absorption	SS 78: Pt A22: 1987 BS 1881-122:2011+A1:2020 ASTM C642-21	) SW, WCK)))
	6. Water Permeability	DIN 1048-5:1991))
	7. Depth of penetration of water under Pressure	BS EN 12390-8:2019)
	8. Making Test Beams	SS 78 Part A9: 1987 BS 1881-109:1983 BS EN 12390-1:2021 BS EN 12390-2:2019	) SW, WCK)))
	9. Making Test Cylinders	SS 78 Part A10: 1987 BS 1881-110:1983 BS EN 12390-1:2021 BS EN 12390-2:2019))))
	10. Tensile Splitting Strength of Test Specimens	SS 78 Part A17: 1987 BS 1881-117:1983 BS EN 12390-6:2009	) SW, WCK))
	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))
	13. Compressive Strength of Cores	SS 78: Pt A20: 1987 BS 1881-120:1983 BS EN 12504-1:2019 AS 1012.9:2014))))

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	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)
	16. Length Change (Drying Shrinkage & Wetting Expansion)	ASTM C157/C157M-17)
	17. Concrete's Ability to Resist Chloride Ion Penetration (Rapid Chloride Permeability Test)	ASTM C1202-22e1	) SW, WCK)))
	18. Coefficient of Permeability	Darcy's Theory - HDB Test Method EL-A-OP-CMT-SIN-MD217 Issue 1 July 2023)))
	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))))
	21. Microscopical Determination of Parameters of the Air-Void System in Hardened Concrete	ASTM C457/C457M-23 (Procedure B)	) SW, JAA)))
	22. Water Sorptivity	ASTM C1585-20 EL-A-OP-CMT-SIN-MD220 Issue 1 July 2023	) SW)
	23. Density, Absorption, and Voids	ASTM C642-21	) SW, WCK
	24. Calibration of Cube Mould	BS EN 12390-1:2021) SW, WCK
	25. Autogenous Strain of Cement Paste and Mortar	ASTM C1698-19) SW)

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3. Hardened Concrete (Non-Destructive Tests)	26. Flexural tensile strength (limit of proportionality (LOP), residual)	BS EN 14651:2005+A1:2007) SW, WCK))
	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
	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-15	) SW, WCK)))
	31. Energy absorption capacity of fibre reinforced slab specimens	BS EN 14488-5:2006)
	32. Carbonation resistance of concrete - Accelerated carbonation method	BS EN 12390-12: 2020	SW, WCK
	1. Determination of Rebound Number of Hardened Concrete	ASTM C805/C805M-18 BS EN 12504-2:2021	) SW, AC)
	2. Ultrasonic Pulse Velocity Measurement	ASTM C597-22 BS EN 12504-4:2021))
	3. Covermeter Test	BS 1881-204:1988)
	4. Strain Measurement (Electrical Displacement)	BS 1881-206:1986	) SW)
	5. Initial Surface Absorption	BS 1881-208:1996)
	6. Half-Cell Potential Measurement	ASTM C876-22b	) SW, AC
7. Depth of Carbonation, cores or broken (on concrete)	BS EN 14630:2006 BRE Publication (IP6/81) RILEM TC14-CPC 1988)))	

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D. REPAIR MATERIAL	8. Penetration Resistance	ASTM C803/C803M-18)	
	9. Ground Penetration Radar	ASTM D6432-19)	
	1. Non-Shrink Grout (For Pressure Grouting)	1. Flow Consistency	ASTM C939/C939M-22	) SW
		2. Compressive Strength	ASTM C942-21)
		3. Expansion/Shrinkage	ASTM C940-22)
		4. Bleeding	ASTM C940-22)
		5. Setting Time (Initial & Final Set)	ASTM C953-17)
	2. Non-Shrink Grout (For Semi-Precast Construction)	1. Flow Consistency	BS 4551-1:1998 ASTM C1437-20	) SW
		2. Compressive Strength	BS EN 196-1:2016 ASTM C109/C109M-21	) SW, WCK
		3. Change in Height	ASTM C827/C827M-16	) SW
		4. Setting Time	BS EN 196-3:2016)
		5. Bond Strength at 28 days	BS 6319-4:1984 BS EN 12615:1999)
	3. Polymer Modified Cement Mortar	1. Compressive Strength	ASTM C109/C109M-21 BS EN 12190:1999 ASTM C349-18	) SW, WCK) SW
		2. Stiffening time	BS EN 1015-9:1999	) SW
		3. Shrinkage at 28 days	ASTM C531-18)
		4. Tensile pull off strength (before and after weathering)	BS EN 1015-12:2016 EL-A-OP-CMT-SIN-MD210 Issue 1 July 2023 EL-A-OP-CMT-SIN-MD211 Issue 1 July 2023)
	4. Bonding Agent	1. Slant Shear Bond Strength (Type I)	ASTM C1042:1999) SW)

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5. Waterproofing Material for External Wall Seepage Repair	2. Slant Shear Bond Strength (Type II)	ASTM C1042:1999))
	3. Total Solids Content	ISO 124:2014)
	1. Tensile pull off strength	ASTM D4541-02(Method A, Type I Tester) ASTM D7234-22	) SW))
	2. Water Vapour Transmission (Water Method only)	ASTM E96/E96M-22ae1 ASTM D1653-13(2021))))
6. Flexible Cementitious Waterproof Membrane (Water-Based)	3. Tensile Strength & Elongation at Break	ASTM D412-16(2021) Method A))
	4. Crack Bridging	ASTM C836/C836M-18(2022) EL-A-OP-CMT-SIN-MD201 Issue 1 July 2023 AS/NZS 4548.5:1999	) SW))
	1. Tensile pull off strength	ASTM D4541-02 (Method A, Type I Tester) ASTM D7234-22	) SW))
	2. Tensile Strength & Elongation at Break	ASTM D412-16(2021) Method A)
7. Flexible Non-Cementitious Waterproof Membrane (Water-Based)	3. Crack Bridging	ASTM C836/C836M-18(2022) EL-A-OP-CMT-SIN-MD202 Issue 1 July 2023))
	4. Water Penetration Test	EL-A-OP-CMT-SIN-MD203 Issue 1 July 2023 based on DIN 1048-5:1991	) SW, SS, EC, JC
	5. Initial Hardness (Shore A)	ASTM D2240-15(2021)	) SW
	6. Set to touch	ASTM D1640/D1640M-14(2022))
	1. Tensile pull off strength	ASTM D4541-02 (Method A, Type I Tester) ASTM D7234-22) SW))
	2. Tensile Strength & Elongation at Break	ASTM D412-16(2021) Method A))

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8. Waterproofing Membrane for RC Roof - Bituminous Type	3. Crack Bridging	ASTM C836/C836M-18(2022) EL-A-OP-CMT-SIN-MD202 Issue 1 July 2023))
	4. Water Penetration Test	EL-A-OP-CMT-SIN-MD204 Issue 1 July 2023 based on DIN 1048-5:1991))
	5. Initial Hardness (Shore A)	ASTM D2240-15(2021))
	6. Set to touch	ASTM D1640/D1640M-14(2022))
	1. Tensile pull off strength	ASTM D4541-02 (Method A, Type I Tester) ASTM D7234-22)))
	2. Tensile Strength & Elongation at Break	ASTM D412-16(2021) Method A)
	3. Crack Bridging	ASTM C836/C836M-18(2022) EL-A-OP-CMT-SIN-MD202 Issue 1 July 2023))
	4. Water Vapour Transmission	ASTM E96/E96M-22ae1)
	5. Water Penetration Test	EL-A-OP-CMT-SIN-MD205 Issue 1 July 2023 based on DIN 1048-5:1991))
	6. Initial Hardness (Shore A)	ASTM D2240-15(2021))
	7. Accelerated Weathering	ASTM G154-23 EL-A-OP-CMT-SIN-MD207 Issue 1 July 2023))
	8. Set to touch	ASTM D1640/D1640M-14(2022))
9. Solid Content	SS 133: 2017 Annex D (Method A))	
10. Heat Test	SS 133: 2017 Annex H)	
11. Water Resistance Test	SS 133: 2017 Annex J)	
12. Direct Flame Test	SS 133: 2017 Annex K)	

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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)
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)
	3. Coefficient of Linear Thermal Expansion	ASTM C531-18)
10. Epoxy Mortar	4. Water Absorption	ASTM C413-18(2023))
	5. Tensile Strength	ASTM C307-23 BS 6319-7:1985)
	6. Flexural Strength	ASTM C580-18(2023) BS 6319-3:1990)
11. Epoxy Resin for Injection	1. Determination of Bond Strength	ASTM C882/C882M-20	) SW
	2. Density	SS 5: Pt B7: 2013 (2018) ASTM D1475-13(2020))
12. Bituminous and Non-Bituminous Pre-formed Waterproofing Membrane for Concealed Roof	1. Dimensional Stability	SS 374:1994(2023)	) SW
	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)

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13. Waterproofing Membrane	9. Pull-Off Adhesion Strength	ASTM D4541:2002 (Method A, Type I Tester) ASTM D7234-22 BS EN 1542:1999)))
	10. Artificial ageing by long term exposure to elevated temperature	BS EN 1296:2001 SS 374:1994(2023) DIN 16726:2017)))
	11. Behaviour after Storage in Aqueous Solutions	DIN 16726:2017)
	12. Chemical Resistance	BS EN 14414:2004 (Method A & B) ASTM D543-21))
	13. Resistance to Leaching	BS EN 14415:2004 (Method A & B))
	14. Hydrostatic Pressure Resistance	ASTM D5385/D5385M-20)
	15. Lateral Water Migration	EL-A-OP-CMT-SIN-MD222 Issue 1 July 2023 ASTM D5385/D5385M-20)
	16. Tear Strength	ASTM D624-00(2020) (Type C & T))
	17. Resistance to static loading	BS EN 12730:2015 Method B)
	18. Resistance Tearing	BS EN 12310-2:2018)
	19. Peel resistance of joints	BS EN 12316-2:2013)
	20. Electrical resistivity	ASTM D257-14(2021)e1)
	21. Adhesive and Cohesive Strength Between Materials in Roofing or Waterproofing Membranes and Systems	ASTM D7105/D7105M-06 (2019)e1)
22. Static Puncture Resistance	ASTM D5602/D5602M-18(2022))	
23. Water Penetration	EL-A-OP-CMT-SIN-MD203A Issue 1 July 2023 based on DIN 1048-5:1991))	

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	24. Length, Width and Net Mass	ISO 2286-1:2016 BS EN ISO 2286-1:2016 DIN EN ISO 2286-1:2016	
	25. Mass per Unit Area	ISO 2286-2:2016 BS EN ISO 2286-2:2016 DIN EN ISO 2286-2:2016	
	26. Thickness	ISO 2286-3:2016 BS EN ISO 2286-3:2016 DIN EN ISO 2286-3:2016	
14. Rubber Waterstop	1. Change in Mass (after immersion) Change in Volume (after immersion)	ASTM D471-16a(2021)	) SW
E. BUILDING MATERIAL 1. Tile Adhesive (Fast and Normal Set)	1. Tensile Adhesion Bond Strength	BS EN 1348:2007 BS EN 12004-2:2017	) SW)
	2. Tensile Adhesion Bond Strength (After Water immersion)	BS EN 1348:2007 BS EN 12004-2:2017))
	3. Tensile Adhesion Bond Strength (After Heat Aging)	BS EN 1348:2007 BS EN 12004-2:2017))
	4. Open Time	BS EN 1346:2007 BS EN 12004-2:2017))
	5. Deformity	BS EN 12002:2008 BS EN 12004-2:2017))
	6. Slip	BS EN 1308:2007 BS EN 12004-2:2017))
	7. Pull Out Test (Site Test)	EL-A-OP-CMT-SIN-MD215 Issue 1 July 2023	) AC
2. Tile Grout	1. Shrinkage	BS EN 12808-4:2009 BS EN 13888-2: 2022	) SW
	2. Water Absorption	BS EN 12808-5:2008 BS EN 13888-2: 2022)
	3. Compressive Strength	BS EN 12808-3:2008 BS EN 13888-2: 2022)

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3. Prepacked Floor Screed/ Prepacked Waterproof Screed	4. Flexural Strength	BS EN 12808-3:2008 BS EN 13888-2: 2022)
	5. Abrasion Resistance	BS EN 12808-2:2008 BS EN 13888-2: 2022)
	1. Average compressive strength	ASTM C109/C109M-21	) SW, WCK
	2. Flow	ASTM C1437-20	) SW
	3. Water Absorption	ASTM C413-18(2023))
	4. Water Penetration Test	EL-A-OP-CMT-SIN-MD203 Issue 1 July 2023 based on DIN 1048-5:1991	) SW, SS, EC, JC
	5. Flexural Strength	ASTM C348-21	) SW
	6. Water Retentivity	BS 4551:2005+A2:2013)
4. Prepacked Plaster/ Prepacked Mortar	7. Stiffening time	BS EN 1015-9:1999 (Method A))
	8. Volume change	ASTM C827/C827M-16)
	1. Tensile pull off strength	BS EN 1015-12:2016	) SW
	2. Compressive Strength	BS EN 1015-11:2019 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 C531-18)
	7. Pull Out Test (Site Test)	EL-A-OP-CMT-SIN-MD216 Issue 1 July 2023	) AC
	8. Determination of modulus of elasticity in compression	BS EN 13412:2006 (Method 2)) SW, WCK
	9. Flexural strength	BS EN 1015-11:2019) SW

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5. Prepacked Skim Coat	1. Tensile pull off strength	BS EN 1015-12:2016) SW
	2. Tensile pull off strength (after weathering)	BS EN 1015-12:2016 EL-A-OP-CMT-SIN-MD208 Issue 1 July 2023))
	3. Compressive Strength	BS EN 1015-11: 2019)
	4. Water Retentivity	BS 4551: 2005+A2: 2013)
	5. Setting Time	BS EN 196-3:2016)
	6. Linear Shrinkage	ASTM C531-18)
	7. Pull Out Test (Site Test)	EL-A-OP-CMT-SIN-MD216 Issue 1 July 2023	) AC
6. Acrylic Polymer Cementitious Coating	1. Compressive Strength	ASTM C109/C109M-21	) SW, WCK
	2. Flexural Strength	ASTM C348-21	) SW
	3. Tensile Strength	ASTM C307-23)
	4. UV Accelerated Weathering	ASTM G154-23 EL-A-OP-CMT-SIN-MD209 Issue 1 July 2023))
	5. Skid Resistance	ASTM E303-22)
	6. Taber Abrasion	ASTM D4060-19 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)
	8. Water Penetration Test	EL-A-OP-CMT-SIN-MD206 Issue 1 July 2023 based on DIN 1048-5:1991)
7. Self-Leveling Screed	1. Compressive Strength	ASTM C109/C109M-21) SW, WCK
	2. Linear Shrinkage/Length Change	ASTM C157/C157M-17 ASTM C531-18) SW)

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7. Self-Leveling Screed	3. Slip Resistance (before & after accelerated weathering)	BS 7976-2:2002+A1:2013)
	4. Tensile Adhesion Bond Strength	ASTM D4541-02 (Method A, Type I Tester) BS EN 13892-8:2002)))
	5. Shear Adhesion Bond Strength	ASTM C482-20)
	6. Accelerated Weathering (UV Exposure)	ASTM G154-23)
	7. Flowability	ASTM C939/C939M-22)
	8. Water Absorption	ASTM C413-18(2023) (Method A))
	8. Sealant	9. Abrasion Resistance	BS EN 13892-4:2002	) SW, SS
1. Staining and Color Change		ASTM C510-16(2022)	) SW
2. Extrusion Rate		ASTM C1183/C1183M-13 (2018))
3. Rheological (Flow) Properties		ASTM C639-15(2020))
4. Indentation Hardness		ASTM C661-15(2022))
5. Tack-Free Time		ASTM C679-15(2022))
6. Adhesion and Cohesion Under Cyclic Movement (Hockman Cycle)		ASTM C719-22)
7. Effects of Heat Aging		ASTM C1246-17(2022))
8. Effects of Laboratory Accelerated Weathering		ASTM C793-23	) SW
9. Adhesion-in-Peel		ASTM C794-18)
10. Durability of Sealants Exposed to Continuous Immersion in Liquids		ASTM C1247-20)
11. Extrudability	ISO 8394-2: 2017) SW, SS	

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8. Sealant	12. Rate of Cure	BS EN 14187-1: 2017)
	13. Tack Free Time	BS EN 14187-2: 2017)
	14. Self-Levelling Properties	BS EN 14187-3: 2017)
	15. Change in Mass and Volume	ISO 10563: 2023)
	16. Change in Mass and Volume after Immersion in Test Fuels and Liquid Chemicals	BS EN 14187-4: 2017)
	17. Resistance to Hydrolysis	EN 14187-5: 2019)
	18. Resistance to Flame	EN 14187-7: 2019)
	19. Adhesion/Cohesion Properties at Variable Temperatures	BS EN ISO 9047: 2003)
	20. Tensile Properties at Maintained Extension	ISO 8340: 2005)
	21. Elastic Recovery of Sealants	EN ISO 7389: 2003)
	22. Artificial Weathering by UV-Irradiation	BS EN 14187-8: 2017)
	23. Adhesion/Cohesion Properties after Immersion in Test Fuels and Liquid Chemicals	BS EN 14187-6: 2017)
24. Resistance to Flow	ISO 7390:2002)	
F. PAINT/ COATING	1. Adhesion (Pull Off) Strength	ASTM D4541-22 (Method B)	) SW, AC,
		ASTM D7234-22	) SS
		BS EN ISO 4624:2023 (Method B))
		BS EN 1542:1999)
	2. Wet Film Thickness	ISO 2808:2019 (Method 1A)) SS
		SS 5-B1:2013 (2018))

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F. PAINT/ COATING	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 ISO 19840:2012) AC, SS)))))) AC
	4. Alkali resistance (spotting method)	SS 5 - G2 : 2003 (2013)	) SW
	5. Compatibility on wet concrete	BS EN 13578:2003)
	6. Methods of conditioning before testing - UV accelerated weathering	BS EN 1062-11:2007 ISO 11507:2007 ISO 16474-3:2021)
	7. Static Crack Bridging	BS EN 1062-7:2004, Method A)
	8. Tensile & Elongation at Break	BS ISO 37:2017)
	9. Water-Vapour Transmission	BS EN ISO 7783:2018)
	10. Luminance Factor	SS 589-2013:2022 (BS EN 1871:2020 Annex F)))
	11. Skid Resistance	SS 589-2013:2022 Annex C)
	12. Flow Resistance	SS 589: 2013 Annex B)
	13. Softening Point	SS 589-2013:2022 (BS EN 1871:2020 Annex G))
	14. Heat stability	SS 589-2013:2022 (BS EN 1871:2020 Annex H))
	15. Rating Adhesion by Tape Test	ASTM D3359-23	) SW, SS
	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, SS)

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G. ADMIXTURES	18. Visual comparison of colour of paints	ISO 3668:2017 SS 5 - E3:2019) SW, SS)
	19. Pencil hardness test	ASTM D3363-22	) SS
	20. Scratch resistance test	SS 5-F2:2013 (2018))
	21. Resistance to salt spray	SS 5-G10:2020))
	22. Resistance to humidity	SS 5-G7:2020)
	1. Water Reduction	BS EN 12350-2:2019 BS EN 480-1:2014 SS EN 934-2:2015	) SW, WCK))
	2. Compressive Strength	BS EN 12390-3:2019 BS EN 480-1:2014 SS EN 934-2:2015	) SW, WCK))
	3. Air Content-Pressure Methods	BS EN 12350-7:2019 BS EN 480-1:2014 SS EN 934-2:2015	) SW, WCK))
	4. Increase in Consistence	BS EN 12350-2:2019 BS EN 480-1:2014 SS EN 934-2:2015	) SW, WCK))
	5. Retention of Consistence	BS EN 12350-2:2019 BS EN 480-1:2014 SS EN 934-2:2015	) SW, WCK))
	6. Bleeding	BS EN 480-4:2005 BS EN 480-1:2014 SS EN 934-2:2015	) SW, WCK))
	7. Setting Time	BS EN 480-2:2006 BS EN 480-1:2014 SS EN 934-2:2015	) SW, WCK))
	8. Capillary Absorption	BS EN 480-5:2005 BS EN 480-1:2014 SS EN 934-2:2015) SW))
	9. Sampling	BS EN 934-6:2019 SS EN 934-6:2008 (2015)) SW, WCK)

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H. CEMENT 1. Ordinary Portland Cement /Sulphate-resisting and Portland Blast Furnace Slag Cement. Ground Granulated Blast Furnace Slag, Silica Fume & Fly Ash	10. Effect on Corrosion Susceptibility of Reinforcing Steel by Potentiostatic Electro-Chemical Test	BS EN 480-14: 2006	SW, WCK
	1. Determination of Strength	BS EN 196-1:2016 ASTM C109/C109M-21 SS 397 Part 1: 1997	) SW, WCK))
	2. Determination of Setting Times	BS EN 196-3:2016 SS 397 Part 3: 1997 ASTM C191-21	) SW, WCK))
	3. Determination of Soundness	BS EN 196-3:2016 SS 397 Part 3: 1997	) SW, WCK))
	4. Determination of Fineness	BS EN 196-6:2018 SS 397 Part 6: 1997 ASTM C204-23	) SW, WCK))
	5. Moisture Content	BS EN 15167-1:2006 Annex A SS EN 15167-1:2008 Annex A (2016) ASTM C311 /C311M-22	) SW, WCK)))
	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))))
	7. Air Content	ASTM C185-20	) SW, WCK))
	8. Amount of Water Required for Normal Consistency	ASTM C187-16	) SW, WCK))
	9. Fineness by Wet Sieving	BS EN 451-2:2017 ASTM C430-17	) SW, WCK))
	10. Water Requirement for Category S Fly Ash	BS EN 450-1:2012, Annex B	) SW, WCK))
11. Potential Expansion of Portland-Cement Mortars Exposed to Sulfate	ASTM C452-21) SW	

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2. Masonry Cement	1. Setting Time	BS EN 413-2:2016 BS EN 196-3:2016) SW))
	2. Soundness	BS EN 196-3:2016))
	3. Compressive Strength	BS EN 196-1:2016))
	4. Consistence of Fresh Mortar	BS EN 413-2:2016	) SW)
	5. Air Content	BS EN 413-2:2016))
	6. Water Retentivity	BS EN 413-2:2016))
	7. Sieve Residue	BS EN 196-6:2018)
I. CURING COMPOUND	1. Water Retention	ASTM C156-20	) SW)
	2. Bond Strength Test	ASTM C882/C882M-20 Clause 11.3 only EL-A-OP-CMT-SIN-MD219 Issue 1 July 2023))))
	3. Density Test	ASTM D1475-13(2020)))
	4. Non-Volatile Matter Test	ASTM D1644-01(2017) (Method A & B))))
	5. Volatile Content	ASTM D2369-20))
	6. Curing Efficiency Index	BS 7542:1992)
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))
	3. Initial Surface Absorption	BS 1881-208:1996)
	4. Carbonation Depth	BRE Publication (IP6/81) BS EN 14630:2006))

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2. Burnt Clay and Shale Bricks	1. Determination of Dimensions	SS 103: 1974) SW
	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(2017), Section 6	) SW
	2. Density	BS EN 772-13: 2000 BS EN 678:1994 ASTM C1693-11(2017), Section 7)
	3. Drying Shrinkage	BS EN 680:2005 ASTM C1693-11(2017), Section 8)
	4. Water Absorption due to Capillary Action	BS EN 772-11:2011)
	5. Dimensions	BS EN 772-16: 2011)
4. Concrete Masonry Units	1. Geometrical Characteristics	SS 271: 1983	) SW
	2. Compressive Strength)
	3. Drying Shrinkage)
	4. Total Water Absorption)
4. Concrete Masonry Units	5. Measurement of Dimensions	ASTM C140/C140M-22c)
	6. Compressive Strength)
	7. Absorption)

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K. CERAMIC WALL AND FLOOR TILES	1. Determination of Dimensions	SS 483: 2000 BS ISO 13006:2018 (BS EN 14411:2016) BS EN ISO 10545-2:2018) SW
	2. Determination of Straightness of Side)
	3. Determination of Rectangularity)
	4. Determination of Surface Flatness)
	5. Determination of Surface Quality)
	6. Determination of Resistance to Deep Abrasion)
	7. Tensile and Shear Adhesion Bond Strength)
	8. Determination of Modulus of Rupture)
	9. Determination of Water Absorption)
	10. Determination of Scratch Hardness of Surface)
	11. Slip Resistance Test	(SS 483: 2000) BS ISO 13006:2018 SS 485:2022 AS 4856:2013 (BS EN 14411:2016)) SW) SW, AC
	12. Reverse Staining	EL-A-OP-CMT-SIN-MD214 Issue 1 July 2023) SW

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K. CERAMIC WALL AND FLOOR TILES	13. Stain Resistance	(SS 483: 2000) BS ISO 13006:2018 (BS EN 14411:2016) SS 57: 1989 Appendix H.7 ISO 10545-14:2015))))))
	14. Chemical Resistance	(SS 483: 2000) BS ISO 13006:2018 (BS EN 14411:2016) ISO 10545-13:2016)))))
	15. Coefficient of Friction	SS 485:2022 AS 4856:2013))
	16. Sampling and Basic for Acceptance	(SS 483: 2000) BS ISO 13006:2018 (BS EN 14411:2016) ISO 10545-1:2014	) SW))))
	17. Colourfastness	SS 57: 1989 Appendix F SS 301: 1985 Appendix H)))
L. ROCKS	1. Unconfined Compressive Strength of Core Specimens	ASTM D7012-23 Method C	) SW, MAT))
	2. Water (Moisture) Content of Soil and Rock	ASTM D2216-19)))
	3. Point Load Strength Index	ASTM D5731-16 ISRM Suggested Method - 1978)))
	4. Petrographic Description of Rocks	ISRM Suggested Method - 1978	) SW, JAA)
	5. Particle Size Distribution	BS EN 13383-2:2019	) SW, MAT))
	6. Length-to-Thickness Ratio (Elongation)	BS EN 13383-2:2019)))
	7. Particle Density & Water Absorption	BS EN 13383-2:2019)))
	8. Block Integrity - Drop Test	BS EN 13383-1:2002 Annex B) SW

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M. NATURAL STONE / GRANITE	1. Water absorption and Bulk Specific Gravity	ASTM C97/C97M-18) SW, MAT)
	2. Compressive Strength	ASTM C170/C170M-17 BS EN 1926:2006, Annex A))
	3. Petrographic Examination	BS EN 12407:2019 BS EN 12670:2019	) SW, JAA)
	4. Modulus of Rupture	ASTM C99/C99M-18	) SW, MAT)
	5. Flexural Strength	ASTM C880/C880M-18e1)
N. STRUCTURAL FIXINGS	1. Determination of 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))
	3. Proof load test for pullout resistance of fastening systems for railway applications	BS EN 13146-10 2017)
O. BITUMINOUS PREMIXES	1. Bitumen Content	ASTM D2172/D2172M-17e1	) SW
	2. Density of Premix on Cored Samples	BS 598-104:2005	) SW, LCH))
	3. Density of Cored Premix with Sample Preparation	BS 598-104:2005)))
	4. Marshall Density	BS 598-107:2004 ASTM D1559-89)))
	5. Marshall Stability	BS 598-107:2004 ASTM D1559-89 ASTM D6927-22))))
	6. Particle Size Distribution	BS 812-103.1:1985))
	7. Percentage Voids Density of Core Method	BS 598-104:2005)))

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O. BITUMINOUS PREMIXES	8. Thickness of Core	ASTM D3549/D3549M-18(2023) (Method A) BS EN 12697-36:2022)))))
	9. Asphalt Content by Ignition Method	ASTM D6307-19))))
	10. Los Angeles Abrasion	BS EN 12697-17: 2017)))
	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 Macrottexture Depth Using a Volumetric Technique	ASTM E965-15(2019) BS EN 13036-1:2010	) AC)))
	13. Preparation of Asphalt Mixture Specimens Using Marshall Apparatus	ASTM D6926-20	) SW, LCH))))
	14. Mechanical Size Analysis of Extracted Aggregate	ASTM D5444-23)))))
	15. Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures	ASTM D2726/D2726M-21)))))
	16. Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures	ASTM D3203-22	) SW, LCH))))
	17. Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures	ASTM D2041/D2041M-19)))))
	18. Effect of Moisture on Asphalt Concrete Paving Mixtures	ASTM D4867/D4867M-22 (2014))))))
	19. Determination of Wheel-tracking Rate and Depth	BS 598-110:1998 BS EN 12697-22:2020)))))

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P. PRECAST CONCRETE UNITS 1. Concrete Paving Blocks 2. Concrete Kerb, Channel 3. Slab (Aeration/Porous) 4. Concrete Paving Flags	20. Density of Bituminous Concrete in Place by Nuclear Methods	ASTM D2950/D2950M-22) SW, AC))
	21. Deflections(Light Weight Deflectometer)	ASTM E2583-07(20)	) SW, AC
	1. Compressive Strength	BS EN 1338:2003	) SW
	2. Visual Aspects and Appearance (Annex J))
	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))
	1. Water Absorption	SS 214:2022 BS 7263-1:1994	) SW, WCK)
	2. Transverse Strength	BS 7263-1:2001)
	1. Water Absorption	BS 7263-1:1994 BS 7263-1:2001	) SW)
	2. Transverse Strength)
	1. Visual Aspects and Appearance (Annex J)	BS EN 1339:2003)
	2. Bending Strength and Breaking Load (Annex F))
	3. Slip/Skid Resistance (USRV) (Annex I))
	4. Total Water Absorption (Annex E))

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5. Concrete Kerb Units	1. Visual Aspects and Appearance (Annex J)	BS EN 1340:2003) SW
	2. Shape and Dimensions, Thickness of Facing Layer (Annex C))
	3. Bending Strength (Annex F))
	4. Slip/Skid Resistance (USRV)(Annex I))
5. Concrete Kerb Units	5. Total Water Absorption (Annex E))
6. Clay Pavers	1. Shape and Dimensions (Annex B)	BS EN 1344:2013	) SW
	2. Transverse Breaking Load (Annex D))
	3. Abrasion Resistance (Annex E))
	4. Slip/Skid Resistance (USRV))
Q. GROUTS 1. Geotechnical Grouting	Specification BS EN 12715: 2020		) SW
	1. Bleeding	BS EN 12715:2020 ASTM C940-22)
	2. Setting Time	BS EN 196-3:2016	) SW
	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 12350-8:2019)
	7. Penetrability by Filter Pump	BS EN 14497:2004)
	8. Compressive Strength	BS 1377-7:1990, Section 7 BS 1377-2:2022 (Section 27) (Load Frame Method))))

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2. Prestressing Tendons	1 Sieve test	BS EN 445:2007 Clause 4.2) SW
	2 Fluidity test - Cone method	BS EN 445:2007 Clause 4.3.1)
	3 Fluidity test - Grout spread	BS EN 445:2007 Clause 4.3.2)
	4 Volume change and bleeding measurement - Wick-induced test	BS EN 445:2007 Clause 4.5)
	5 Compressive strength test	BS EN 445:2007 Clause 4.6)
	6 Setting time	BS EN 196-3:2016)
	7 Density test	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	) SW
	2. Moisture-Density (Unit Weight) Relations of Soil-Cement Mixtures	ASTM D558/D558M-19	) SW, MAT))
	3. Compressive Strength of Molded Soil-Cement Cylinders	ASTM D1633-17)))
	4. Measuring Thickness of Concrete Elements Using Drilled Concrete Cores	ASTM C174/C174M-17)
S. RESILIENT FLOOR COVERINGS	1. Determination of side length, edge, straightness and squareness of tiles	BS EN ISO 24342:2018	) SW
	2. Determination of overall thickness	BS EN ISO 24346:2012)
	3. Determination of thickness of layers	BS EN ISO 24340:2012) SW
	4. Determination of mass per unit area	BS EN ISO 23997:2012)

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S. RESILIENT FLOOR COVERINGS	5. Determination of flexibility and deflection	BS EN ISO 24344:2012 (Method A))
	6. Determination of wear resistance. Frick-Taber test	BS EN 660-2:1999)
	7. Slip Resistance (dry floor friction & wet pendulum test methods)	SS 485:2022 AS 4856:2013	) SW, AC, SS
	8. Determination of staining and resistance to chemicals	BS EN ISO 26987:2012	) SW
	9. Castor chair test	ISO 4918:2016	) SW, SS
	10. Resistance to burning Cigarettes	EN 1399:1997 (Method B))
T. DRY WALL	1. Determination of partition wall stiffness (Annex A)	SS 492: 2001 (2014) BS 5234-2:1992	) SW)
	2. Determination of surface damage by small hard body impact (Annex B)	SS 492: 2001 (2014) BS 5234-2:1992))
	3. Determination of resistance to damage by impact from a large soft body (Annex C)	SS 492: 2001 (2014) BS 5234-2:1992))
	4. Determination of resistance to perforation by small hard body impact (Annex D)	SS 492: 2001 (2014) BS 5234-2:1992))
	5. Determination of resistance to structural damage by multiple impacts from a large soft body (Annex E)	SS 492: 2001 (2014) BS 5234-2:1992))
	6. Determination of the effects of door slamming (Annex F)	SS 492: 2001 (2014) BS 5234-2:1992))
	7. Determination of 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)

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
T. DRY WALL	9. Lightweight anchorage pull down test (Annex J)	SS 492: 2001 (2014) BS 5234-2:1992))
	10. Heavyweight anchorage (wash basin) eccentric downward loading test (Annex K)	SS 492: 2001 (2014) BS 5234-2:1992)))
	11. Heavyweight anchorage (high level wall cupboard) eccentric downward loading test (Annex L)	SS 492: 2001 (2014) BS 5234-2:1992)))
	12. Surface & Total water Absorption	BS EN 520:2004+A1:2009 Clause 5.9)
	13. Moisture Movement	ASTM C1185-08(2016) Clause 8 BS EN 12467:2012+A2:2018 Annex C))))
	14. Water impermeability	BS EN 12467:2012+A2:2018 Clause 7.3.3))
	15. Flexural Breaking Load	BS EN 520:2004+A1:2009 Clause 5.7)
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	) SS
	2. Compression deflection	ASTM D1056-20)
	3. Oven aged compression deflection	ASTM D1056-20)
	4. Compression set	ASTM D1056-20)
W. BUILDING ENVELOPES	1. Infrared Thermography	ISO 6781:1983 BS EN 13187:1999) SW, AC)

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EC : Mr Chuo Chung Sam
JC : Mr Chng Cheow Chea (Jiro)
ROS : Rosliyana Binte Rosli

Note :

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