

Schedule

Element Construction Testing (M) Sdn Bhd
No 18 Jalan Mega 1/5
Taman Preindustrian Nusa Cemerlang
79200 Nusajaya Johor
Malaysia

Certificate No. : LA-2008-0422-B-1
Issue No. : 9
Date : 14 August 2023
Expiry Date : 11 September 2026
Page : 1 of 4

FIELD OF TESTING : Civil Engineering Testing

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
A. Aggregate	1. Particle Size Distribution / Sieve Analysis	BS EN 933-1:2012 ASTM C136/C136M-19 BS 812-103.1:1985 BS EN 13383-2:2019 (Rock)	SW, MAT
	2. Clay, Silt and Dust (Decantation Method)	BS EN 933-1:2012 ASTM C117-17 BS 812-103.1:1985	
	3. Moisture Content (Oven Dried Method)	BS EN 1097-5:2008 BS 812-109:1990	
	4. Bulk Density	BS EN 1097-3:1998 BS 812-2:1995	
	5. Relative Density & Water Absorption	BS EN 1097-6:2022 BS EN 13383-2:2019 BS 812-2:1995 ASTM C127-15 ASTM C128-22 (Gravimetric Method)	
	6. Shell Content	BS EN 933-7:1998 BS 812-106:1985	
	7. Flakiness Index	BS EN 933-3:2012 BS 812-105.1:1989	
	8. Shape Index	BS EN 933-4:2008 BS EN 13383-2:2019 (Rock)	

Schedule



Certificate No. : LA-2008-0422-B-1

Issue No. : 9

Date : 14 August 2023

Page : 2 of 4

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
A. Aggregate	9. Los Angeles Abrasion	BS EN 1097-2:2020 ASTM C131/C131M-20 ASTM C535-16	SW, MAT
	10. Soundness Test	BS EN 1367-2:2009 ASTM C88/C88M-18 BS 812-121:1989	
	11. Organic Impurities	ASTM C40/C40M-20	
	12. Humus Content	BS EN 1744-1:2009+A1:2012 (Clause 15.1)	
	13. Elongation Index	BS 812-105.2:1990	
	14. Crushing Value	BS 812-110:1990	
	15. 10% Fines Value	BS 812-111:1990	
	16. Fineness Modulus	ASTM C136/C136M-19	
B. Hardened Concrete	17. Block Integrity - Drop Test	BS EN 13383-1: 2002 Annex B (Rock)	SW, WCK
	18. Impact Value	BS 812-112:1990 SS 73: 1974	
	1. Compressive Strength	BS EN 12390-3:2019 BS 1881-116:1983 BS EN 12504-1:2019	
	2. Flexural Strength	BS EN 12390-5:2019 BS 1881-118:1983	
	3. Water Absorption	BS 1881-122:2011+A1:2020	
	4. Water Permeability	DIN 1048-5:1991	
	5. Depth of Penetration of Water Under Pressure	BS EN 12390-8:2019	
6. Calibration of Cube Mould	BS EN 12390-1:2021		
7. Concrete's Ability to Resist Chloride Ion Penetration (Rapid Chloride Permeability Test)	ASTM C1202-22e1		

Schedule



Certificate No. : LA-2008-0422-B-1

Issue No. : 9

Date : 14 August 2023

Page : 3 of 4

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

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
C. Metal Product: 1. Reinforcement Bar	8. Tensile splitting strength of test specimens	BS EN 12390-6: 2009	SW, WCK
	9. Fibre Content in Fresh and Hardened Concrete	BS EN 14721:2005+A1: 2007	
	10. Flexural Tensile Strength (Limit of Proportionality (LOP), Residual)	BS EN 14651:2005+A1: 2007	
	1. Tensile Testing (Range of 0 to 600kN)	BS EN ISO 15630-1:2019 ISO 6892-1:2019 (BS 4482:2005) (BS 4449:2005+A3:2016) (SS 560:2016) (SS 566:2011) MS ISO 15630-1:2012 (MS 146:2014) *SS 456:1999 (SS 2-1:1999) (SS 2-2:1999) (SS 2-3:1987)	SW, JF
2. Steel Wire / Fabric	2. Bend & Re-Bend Test	BS EN ISO 15630-1:2019 (BS 4482:2005) (BS 4449:2005+A3:2016) (SS 560:2016) (SS 566:2011) MS ISO 15630-1:2012 (MS 146:2014) *SS 427:1998 (SS 2-1:1999) (SS 2-2:1999) (SS 2-3:1987)	
	1. Tensile Test	BS EN ISO 15630-2:2019 ISO 6892-1:2019 (BS 4483:2005) (SS 561-2010+A2 2022) *SS 456:1999 (SS 18-1:1999) (SS 32-1:1999)	

Schedule



Certificate No. : LA-2008-0422-B-1

Issue No. : 9

Date : 14 August 2023

Page : 4 of 4

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
		(SS 18-2:1970) (SS 32-2:1986)	

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT	SIGNATORY
2. Steel Wire / Fabric	2. Bend & Re-Bend Test	BS EN ISO 15630-2:2019 (BS 4483:2005) (SS 561-2010+A2 2022) *SS 427:1998 (SS 18-1:1999)	SW, JF
	2. Bend & Re-Bend Test	(SS 32-1:1999) (SS 18-2:1970) (SS 32-2:1986) * superseded standard shown for continuity	
D. Cement/Mortar/ Grout	1. Compressive Strength	ASTM C109/C109M-21	SW, WCK
	2. Bulk Density of Fresh Mortar	BS EN 1015-6:1999	SW
	3. Flow	ASTM C1437-20	
	4. Setting Time	BS EN 196-3:2016	

Approved Signatories

SW : Sherly Wijaya
JF : Jason Foo
WCK : Wee Chip Kai
MAT : Perinpanayagam Mathurathy

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.

Schedule



Certificate No. : LA-2008-0422-B-1

Issue No. : 9

Date : 14 August 2023

Page : 5 of 4