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-2013-0540-G

Issue No. : 17

Date : 29 September 2025

Certificate Expiry Date : 11 June 2029

FIELD OF TESTING : Mechanical Testing

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT
A. Metal & Metal Products	1. Tensile Test	ISO 6892-1:2019 ASTM A370-24a ASTM E8/E8M-24 JIS Z 2241:2022 AS 1391:2020 ASTM B557-15(2023) SS 456:1999
	2. Hardness Test (i) Brinell	ASTM E10-23 BS EN ISO 6506-1:2014
	(ii) Vickers	ASTM E384-22 ASTM E92-23 BS EN ISO 6507-1:2023
	(iii) Rockwell	ASTM E18-24 BS EN ISO 6508-1:2023
B. Reinforcement Bar	1. Tensile Testing	BS EN ISO 15630-1:2019 & ISO 6892-1:2019 *BS 4449:2005+A3:2016 *BS 4482:2005 *SS 560:2016(2024)+A1:2024 *SS 566:2011 SS 456:1999 *SS 2-1:1999 *SS 2-2:1999 *SS 2-3:1987

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MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT
B. Reinforcement Bar	2. Bend and Re-bend Test	BS EN ISO 15630-1:2019 *BS 4449:2005+A3:2016 *BS 4482:2005 *SS 560:2016(2024)+A1:2024 *SS 566:2011 SS 427:1998 *SS 2-1:1999 *SS 2-2:1999 *SS 2-3:1987
	3. Measurement of the geometrical characteristics & Determination of the relative rib or indentation area (Surface Geometry)	BS EN ISO 15630-1:2019 *BS 4449:2005+A3:2016 *SS 560:2016(2024)+A1:2024
	4. Determination of deviation from nominal mass per metre	BS EN ISO 15630-1:2019 *BS 4449:2005+A3:2016 *SS 560:2016(2024)+A1:2024
C. Zn and Zn Alloy Coating on Steel or Iron Articles	1. Stripping Test for Determination of Coating Weight	ASTM A90/A90M-21 *ASTM A653/A653M-23 BS EN ISO 1460:2020 *BS EN ISO 1461:2022 SS 117:1975
D. Steel Wire / Fabric	1. Tensile Test	BS EN ISO 15630-2:2019 & ISO 6892-1:2019 *BS 4483:2005 *SS 561:2010(2022)+A2:2022) SS 456:1999 *SS 18-1:1999 *SS 18-2:1970 *SS 32-1:1999 *SS 32-2:1986
	2. Bend and Re-bend Test	BS EN ISO 15630-2:2019 *BS 4483:2005 *SS 561:2010(2022)+A2:2022) SS 427:1998 *SS 18-1:1999 *SS 18-2:1970 *SS 32-1:1999 *SS 32-2:1986

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D. Steel Wire / Fabric	3. Weld Shear Test	BS EN ISO 15630-2:2019 *BS 4483:2005 *(SS 561:2010(2022)+A2:2022 *SS 32-1:1999
E. Seven Wire Prestressing Strand / High Tensile Steel Wire / Prestressing Steel	1. Tensile Strength Test (Yield Strength Elongation & Tensile Strength)	BS EN ISO 15630-3:2019 & ISO 6892-1:2019 *BS 5896:2012 BS EN 10218-1:2012 & ISO 6892-1:2019 ASTM A1061/A1061M-20a(e1) *ASTM A416/A416M-24
F. Reinforcement Steel with Coupler	1. Tension Load Test and Permanent Set Measurement (Slip Test)	ISO 15835-2:2018 BS 8597:2015 ISO 6892-1:2019 BS 8110-1:1997 Clause 3.12.8.16.2
	2. Low Cycle Loading Test	ISO 15835-2:2018
G. Structural Steel	1. Tensile Test	ISO 6892-1:2019 *BS EN 10025-1:2004 *BS EN 10025-2:2019 *BS EN 10210-1:2006 ASTM A370-24a & ASTM E8/E8M-24 *ASTM A20/A20M-20 *ASTM A36/A36M-19 *ASTM A500/A500M-23 *ASTM A516/A516M-25 GB/T 228.1-2010 *GB/T 2975-2018
	2. Bend Test	ASTM A370-24a BS EN ISO 7438:2020 GB/T 232-2010
H. Bolts & Nuts	1. Tensile Test (Bolts)	BS EN ISO 898-1:2013 *BS 3692:2014 *BS 4190:2014 ASTM F606/F606M-24 *ASTM F3125/F3125-25
H. Bolts & Nuts	2. Proof Load Test (Nuts)	BS EN ISO 898-2:2022 *BS 3692:2014 *BS 4190:2014 ASTM F606/F606M-24 *ASTM F3125/F3125-25

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I. Timber	1. Moisture Content	SS 572:2012 BS 373:1957
	2. Static Bending Test	BS 373:1957
	3. Compression Test: a. Parallel to grain b. Perpendicular to grain	 BS 373:1957 BS 373:1957
	4. Janka Indentation Test	BS 373:1957
	5. Bond quality of plywood (chisel test)	AS/NZS 2098.2:2012 (AS/NZS 2754.1:2016)
	6. Shear Parallel to Grain	BS 373:1957
	7. Tension Parallel to Grain	BS 373:1957
J. Epoxy Coated Rebar	1. Coating Flexibility (Bend Test)	ASTM A775/A775M-22
	2. Coating Continuity (Holiday Test)	ASTM A775/A775M-22
	3. Coating Thickness	ASTM A775/A775M-22
K. Laminated Safety Glass for Fixed Panel Below Cill Height	1. Boil Test	SS 341:2001 (2012)+C1:2018
	2. Overall Bow & Warp (Flatness) Test	SS 341:2001 (2012)+C1:2018
	3. Dimensional (Thickness and Squareness Test)	SS 341:2001 (2012)+C1:2018
	4. Impact test	SS 341:2001 (2012)+C1:2018
L. Glazing Glass	1. Dimensional (Length, Width, Thickness, Squareness)	BS 952-1:1995 EN 572-2:2012 (E)
M. Plastic	1. Durometer Hardness (Shore D)	ASTM D2240-15(2021)
	2. Nail Pull Out Test	ASTM D1037-12(2020) Section 14

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M. Plastic	3. Density / Specific Gravity (Method A)	ASTM D792-20
	4. Water Absorption	ASTM D1037-12(2020) Section 23
	5. Wet and Dry Cycle Test	EL-A-OP-CMT-MD070 based on HDB In-House Method
	6. Door Handle Cyclic Test/ Lockset	EL-A-OP-CMT-MD071 based on HDB In-House Method
N. Scaffolding **1. Frame Scaffolding**	1. Dimensional Measurement	SS 280-1:2006 Clause 5
	2. Vertical Frame (Horizontal Member of Frame) a. Load Test on Horizontal Tubes - Annex C1 b. Compressive Test on Vertical Tubes (Standard or Leg) - Annex C2	SS 280-1:2006
	3. Cross Brace a. Load Test - Annex D	SS 280-1:2006
	4. Horizontal Frame a. Deflection and Bending Test - Annex E1 b. Load Test on Clamp (Hook) - Annex E2	SS 280-1:2006
	5. Tread board (Catwalk) a. Deflection and Bending Test - Annex F1 b. Load Test on Clamp - Annex F2 c. Deflection and "Punching" Test on Expanded Metal - Annex F3	SS 280-1:2006
	6. Adjustable Base Plate (Jack Base) a. Load Test - Annex G	SS 280-1:2006
	7. Arm Lock a. Load Test - Annex H	SS 280-1:2006

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	8. Wall Tie a. Tensile Test - Annex I.1 b. Compression Test - Annex I.2	SS 280-1:2006
	9. Cross Brace Pin a. Load Test - Annex K	SS 280-1:2006
2. Modular Scaffolding	1. Dimensional Measurement	SS 280-2:2009 Clause 5
	2. Adjustable Base Plate a. Load Test - Annex C	SS 280-2:2009
	3. Node of vertical Standard a. Load Test - Annex D	SS 280-2:2009
	4. 4. Metal Decking a. Deflection and Bending Test - Annex E1	SS 280-2:2009
	5. Wall Tie a. Tensile Test - Annex F.1 b. Compression Test - Annex F.2	SS 280-2:2009
3. Steel Tubes and Fittings Used in Tubular Scaffoldings	1. 1. Right-Angle Couplers a. Slip Test - Annex C1 b. Maximum Load Test - Annex C2	SS 311: 2005
	2. Swivel Couplers a. Slip Test - Annex D1 b. Maximum Load Test - Annex D2	SS 311: 2005
	3. End-to End Couplers a. Load Test - Annex E	SS 311: 2005
	4. Dimensional Measurement of Tube	SS 311: 2005 Clause 4.3
	5. Material Test of Tube a. Flattening Test – Annex B	SS 311: 2005
O. Flexible Loop Connector	1. Direct Tensile Test	EL-A-OP-MEC-SIN-MD070 (HDB Method)

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	2. In-Plane Shear Test	EL-A-OP-MEC-SIN-MD071 (HDB Method)
	3. Out of Plane Shear Test	EL-A-OP-MEC-SIN-MD072 (HDB Method)
	4. Material Tensile Test	EL-A-OP-MEC-SIN-MD073 (HDB Method)
P. External Retractable Clothes Drying Rack	1. Ultimate Load Test	EL-A-OP-MEC-SIN-MD074 (HDB S60 Method)
	2. Cyclical Test	EL-A-OP-MEC-SIN-MD075 (HDB S60 Method)
Q. Geotextiles	1. Mass per Unit Area	ASTM D5261-10(2024)
	2. Grab Breaking Load and Elongation	ASTM D4632/D4632M-15a (2023)
	3. Trapezoid Tearing Strength	ASTM D4533/D4533M-15(2023)
R. Metal Formwork	1. Dimensional Test	EL-A-OP-MEC-SIN-MD079 based on JIS A 8652
S. Steel Fibre for Concrete	1. Shape	BS EN 14889-1:2006 Clause 5.1.b
	2. Dimensions and Tolerances	BS EN 14889-1:2006 Clause 5.2
	3. Tensile Strength	BS EN 14889-1:2006 Clause 5.3
	4. Modulus of Elasticity	BS EN 14889-1:2006 Clause 5.4
	5. Reverse Bend Test	BS EN 14889-1:2006 Clause 5.5 (BS EN 10218-1:2012 Clause 5 & BS ISO 7801: 2024)

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Schedule

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Approved Signatories:

S/N	Name		Scope
1.	Ms Sherly Wijaya	-	For all accredited tests.
2.	Mr Jason Foo	-	For all accredited tests.
3.	Mr Chuo Chung Sam	-	For accredited tests for Section K, L.
4.	Mr Neo Kia Boon	-	For accredited tests for Section A to F
5.	Mr Go Hock Seng	-	For accredited tests for Section B to D

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 calibrations. 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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