

SINGAPORE LABORATORY ACCREDITATION SCHEME



Schedule

Winwall Technology Pte Ltd
7 Tuas View Close
Singapore 637489

Certificate No. : LA-1996-0101-B

Issue No. : 19

Date : 04 January 2021

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FIELD OF TESTING : Civil Engineering Testing

MATERIALS / PRODUCTS TESTED	TESTS / PROPERTIES	STANDARD METHODS / TECHNIQUES / EQUIPMENT
A Curtain Walls, Exterior Windows & Doors	1. Rate of air leakage under specified pressure differences across specimen	ASTM E283/E283M-19 CNS 13971: 2006
	2. Structural performance by uniform static air pressure	ASTM E330/E330M-14 CNS 13972: 2006
	3. Water penetration by uniform static air pressure difference	ASTM E331: 2000 (Reapproved 2016) CNS 13974: 2006
	4. Water penetration by cyclic static air pressure difference	ASTM E 547: 2000 (Reapproved 2016)
	5. Water penetration using dynamic pressure	AAMA 501.1: 2017 CNS 13973: 2006
B Curtain Walls, Storefronts & Sloped Glazing System	1. Water leakage field check	AAMA 501.2: 2015
C Curtain Walls & Storefront Systems	1. Static test – Seismic and wind induced inter-storey drifts	AAMA 501.4: 2018 CNS 14281: 2006
	2. Static test – Vertical Inter-storey movement	AAMA 501.7-17
D Exterior Walls	1. Thermal Cycling	AAMA 501.5: 2007
E Building Facades	1. Preliminary tests	} AS/NZS 4284: 2008
	2. Structural test at serviceability limit state	
	3. Air infiltration test	

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F	Windows	4. Water penetration test by static pressure followed by cyclic pressure test	AS/NZS 4284: 2008
		5. Seismic test at serviceability limit state displacement (includes subsequent water penetration test)	
		6. BMU restraint test	
		7. Strength test at ultimate limit state	
		8. Seismic test at ultimate limit state displacement	
		9. Seal degradation test	SS 212: 2007
		1. Air leakage test	
		2. Watertightness test	
		3. Structural performance test	
		4. Proof load test	AS/NZS 4420.1:2016
G	Curtain Walls	5. Test sample, preparation for tests and test sequence	
		6. Deflection test	
		7. Operating force test	
		8. Air infiltration test	
		9. Water penetration resistance test	
		10. Ultimate strength test	SS 654: 2020
		1. Pre-loading	
		2. Sash opening and closing cycles	
		3. Air Permeability	
		4. Water-tightness	
		5. Dynamic water-tightness	
		6. Structural performance	
		7. Horizontal movement/racking	
		8. Vertical movement/racking	
		9. Building maintenance unit (BMU) load test	
		10. Proof load test	
		11. External fixture load test	
		12. Field Testing	
		13. Bracket Fastening	SS 381: 2007
		14. Water-tightness	
		15. Air Permeability	
		16. Proof load test	

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	17. Structural performance test	SS 381: 2007 PNAP APP 37– Practice Note for Authorized Persons and Registered Structural Engineers and Registered Geotechnical Engineers, May 2012
H Weather Louvres	1. Water penetration test 2. Discharge and entry loss coefficient / pressure loss	HEVAC Technical Specification, 5 th Edition: 1997 BS EN 13030:2001
I Windows & External Wall	1. Watertightness Test	BCA Construction Quality Assessment System Conquas 2019 R1-27 Dec 2019, Appendix 3, Item 1
J Windows and doors	1. Air Permeability 2. Watertightness 3. Resistance to wind load	BS EN 1026:2016 BS EN 12207:2016 BS EN 1027:2016 BS EN 12208:2000 BS EN 12210:2016 BS EN 12211:2016
K Sliding glass doors	1. Structural performance 2. Air leakage 3. Watertightness 4. Operation tests 5. Proof load	SS 268 :2014

Approved Signatories

Mr Simon Chin

– For All Accredited Tests except Section H

Mr Goh Aik Wee

– For All Accredited Tests

Mr Rector P Gerundio Jr

– For All Accredited Tests

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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.