

Schedule

Winwall Technology Pte Ltd
7 Tuas View Close
Singapore 637489

Certificate No. : LA-1996-0101-B
Issue No. : 23
Date : 8 January 2024
Expiry of Certificate : 6 May 2026
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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 (Reapproved 2021) CNS 13972: 2006
	3. Water penetration by uniform static air pressure difference	ASTM E331-00 (Reapproved 2023) 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
	6. Field water penetration by uniform or cyclic static air pressure difference	ASTM E1105-15 (Reapproved 2023)
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: 2023

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E Building Facades	1. Preliminary tests	} AS/NZS 4284: 2008
	2. Structural test at serviceability limit state	
	3. Air infiltration test	} AS/NZS 4284: 2008
	4. Water penetration test by static pressure followed by cyclic pressure test	
	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	
F Windows	1. Air leakage test	} SS 212: 2007
	2. Watertightness test	
	3. Structural performance test	
	4. Proof load test	
	5. Test sample, preparation for tests and test sequence	} AS/NZS 4420.1:2016
	6. Deflection test	
	7. Operating force test	
	8. Air infiltration test	
	9. Water penetration resistance test	
	10. Ultimate strength test	
G Curtain Walls	1. Pre-loading	} SS 654: 2020+A1:2023
	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	

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	14. Water-tightness 15. Air Permeability 16. Proof load test	} SS 381: 2007
	17. Structural performance test	SS 381: 2007 PNAP APP 37– Practice Note for Authorized Persons and Registered Structural Engineers and Registered Geotechnical Engineers, April 2022
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 2022 1 Nov. 2022, Appendix 3, Item 1
J Windows and doors	1. Air Permeability 2. Watertightness	BS EN 1026:2016 BS EN 12207:2016 BS EN 1027:2016 BS EN 12208:2000
	3. Resistance to wind load	BS EN 12210:2016 BS EN 12211:2016
	4. Field measurement of air leakage	ASTM E783-02 (Reapproved 2018)
K Sliding glass doors	1. Structural performance 2. Air leakage 3. Watertightness 4. Operation tests 5. Proof load	} SS 268 :2014
L Curtain Walling	1. Air Permeability 2. Watertightness	BS EN 12152:2023 BS EN 12153:2023 BS EN 12154:2000 BS EN 12155:2000
	3. Resistance to wind load	BS EN 13116:2001 BS EN 12179:2000

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Approved Signatories

Simon Chin – For All Accredited Tests except Section H

Goh Aik Wee – For All Accredited Tests

Rector P Gerundio Jr – For All Accredited Tests

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.