AWI ARCHITECTURAL WOODWORK INSTITUTE

Performance Quality

TEST REPORT

Tall Cabinet Battery (TC1 & TC2)

2021 Standard of Excellence Corporate/Commercial Winner
Lange Bros. Woodwork Co., Inc., Woodworker
Perkins Eastman, Architect
Tricia Shay, Photograher

OFFICIAL Documentation

AWI ARCHITECTURAL WOODWORK INSTITUTE

Performance Quality

TEST REPORT

Tall Cabinet Battery

The purpose of this test method is to document the performance, structural integrity, and/or the physical endurance of a casework assembly that is created and documented by various joinery methods, materials, adhesives, and hardware components.

Original Rights Holder

Intelligent Fixings Limited
14 Wedgewood Court,
Wedgewood Way
Hertfordshire
United Kingdom

This report shall not be reproduced. Results contained within this report only apply to the actual item tested under the testing conditions documented within this report.

Signee hereby attest these results have been filed with AWI's testing report database

Doug Hague, CEO

ORIGINAL
Official Report

ISSUE DATE 07/30/2024

EXPIRATION DATE **08/31/2025**

PQTR IDENTIFICATION NUMBER

AWITR 002382024A 001

Independent Testing Agency

Architectural Woodwork Institute
46179 Westlake Drive, Suite 120
Potomac Falls, VA 20165

Laboratory Testing Service Order
214890
Laboratory Customer ID
90027507
Laboratory Battery #
TCB-24009
TC1 Specimen #
TC1-24009
TC2 Specimen #
TC2-24009
Date of Receipt
07/24/2024
Date of Test(s)
07/29/2024

Authorizing Laboratory Signee of Official Results

AWI National Testing Center

Signee hereby attest the findings throughout this report are true and accurate. All data was discovered executing the test methodology without error or modification

Hunter Morrison, Technical Director

AWI ARCHITECTURAL WOODWORK INSTITUTE

Tall Cabinet Battery

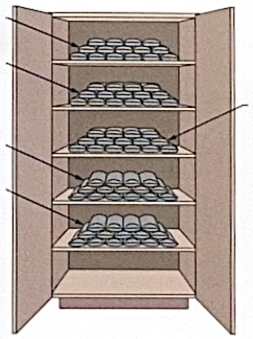
The purpose of this test method is to document the performance, structural integrity, and/or the physical endurance of a finishing technology when exposed to adhesive elements.

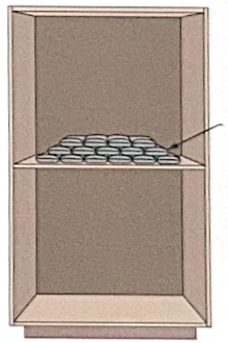
3.0 Significance and Use
This test method will not determine the useful life of architectural casework resulting from the test data obtained. It will, however, indicate casework performance outcomes from test loads over time. This test method is not intended to determine serviceability of hardware components.

Test data will provide useful information for architects, design professionals, and manufacturers in making judgments on the ability of an architectural casework assembly to maintain serviceability under actual loading and operating conditions.

TC1 Duty Level Values

PERFORMANCE DUTY LEVEL	ASSEMBLED UNIT LOAD	TYPICAL APPLICATION
Duty Level 1	30 lb./sq. ft	Light Commercial
Duty Level 2	45 lb./sq. ft	Commercial
Duty Level 3	60 lb./sq. ft	Institutional
Duty Level 4	75 lb./sq. ft	Laboratory





TC2 Duty Level Values

PERFORMANCE DUTY LEVEL	ASSEMBLED UNIT LOAD	TYPICAL APPLICATION
Duty Level 1	105 lb./sq. ft	Light Commercial
Duty Level 2	155 lb./sq. ft	Commercial
Duty Level 3	210 lb./sq. ft	Institutional
Duty Level 4	260 lb./sq. ft	Laboratory

5.2 Test Specimen Assembly

5.2.1 Specimen Materials
The test specimen may be constructed of any material and joinery combination, provided that the materials, fasteners, combination of fasteners, spacing, and machining operation details are fully documented by way of drawing information conveyance.

5.2.2 Specimen Size Requirements
The test specimen shall consist of a tall storage cabinet primarily supported by transfer of load directly to the floor/ground with overall outside dimensions of 914 mm [36"] (± 1.6 mm [.063"]) width × 610mm [24"] (± 1.6 mm [.063"]) depth (including faces of doors) × 2032 mm [80"] (± 1.6 mm [.063"]) height (2134mm [84"] with integrated base or legs).

Unless integrated, overall outside dimensions of ladderbase shall be 889 mm [35"] width × 530 mm [20.875"] depth × 101.6 mm [4"] height.

The test specimen shall include, at minimum, the following assembly components:
- One left vertical side component
- One right vertical side component
- One top horizontal component
- One horizontal fixed shelf component, fixed in the horizontal plane and placed at the interior's vertical midpoint (± 1.6 mm [.063"])
- Four horizontal adjustable shelf components, adjustable in the horizontal plane and placed at equal intervals between the fixed shelf and cabinet top or bottom (± 1.6 mm [.063"])
- One bottom horizontal component
- One vertical back component
- Two vertical hinged doors

DUTY LEVEL VALUES
These load values do not suggest service loads nor shall they be construed as suggesting normal casework usage loads.

TEST SUMMARY

AWI ARCHITECTURAL WOODWORK INSTITUTE

Summarized Results of Casework Test

Tall Cabinet Battery

DUTY LEVEL 3 Institutional

ITEM	NOM. THICK	CORE MATERIAL	CORE GRADE	FACE MATERIAL	BACK MATERIAL
Left Vertical Side	18.3mm	Particleboard (MFC)	P2	TFL	TFL
Right Vertical Side	18.3mm	Particleboard (MFC)	P2	TFL	TFL
Top Horizontal Component	18.3mm	Particleboard (MFC)	P2	TFL	TFL
Horizontal Fixed Shelf Component	25mm	Particleboard (MFC)	P2	TFL	TFL
[4] Adjustable Shelves	25mm	Particleboard (MFC)	P2	TFL	TFL
Bottom Horizontal Component	18.3mm	Particleboard (MFC)	P2	TFL	TFL
Vertical Back Component	18.3mm	Particleboard (MFC)	P2	TFL	TFL
Hinged Doors	18.3mm	Particleboard (MFC)	P2	TFL	TFL
Nailer Component	N/A	N/A	N/A	N/A	N/A

Test Battery

Findings:

There was no loss of serviceability as a result of the tall cabinet test battery. Casework construction methodology TCB-24009 passes Duty Level 3.

Casework Test Results

TEST	SPECIMEN	TARGET DUTY LEVEL	RESULT
TC-1-Assembled Unit Test	TC1-24009	3	Passed
TC-2-Structural Integrity Test	TC2-24009	3	Passed

8.2 Nonconformities

None found during this successful attempt.

Casework Test Loads

BATTERY	SPECIMEN	TEST	COMPONENT	DIMENSIONS	AREA	DUTY LEVEL	LOAD PER ft²	LOAD CALCULATED	LOAD ACTUAL
TCB-24009	TC1-24009	TC-1	Shelves, adj	34.5" x 22.375"	5.36 ft²	3	60 lbs	321.64 lbs	325 lbs
	TC1-24009	TC-1	Fixed shelf	34.5" x 22.375"	5.36 ft²	3	60 lbs	321.64 lbs	325 lbs
	TC2-24009	TC-2	Fixed shelf	34.5" x 22.375"	5.36 ft²	3	210 lbs	1,125.74 lbs	1,130 lbs

TEST SUMMARY

AWI ARCHITECTURAL WOODWORK INSTITUTE

TC-1 Tall Cabinet Assembled Unit Test

Testing was performed in accordance with the AWI Test Methodology TC-1 - Tall Cabinet Assembled Unit Test.

DUTY LEVEL 3 Institutional

TC1-24009 Before Testing

OBSERVATIONS:

There was no loss of serviceability or structural integrity of the casework upon completion of the test.

NOTES:

- See specimen Load Summary for testing loads.
- Casework mounted according to enclosed installation guidelines.
- Shelf elements were evenly loaded with steel shot bags and steel bar weights to Duty Level 3 load.
- Load remained in place for 24 hours.
- One hour after unloading, the specimen was evaluated.

EQUIPMENT USED:

Digital Level, Tape Measure, Feeler Gauge, Depth Micrometer, Steel Shot Bags

TC1-24009 During Testing

TC1-24009 After Unloading

Load Summary

BATTERY	SPECIMEN	TEST	COMPONENT	DIMENSIONS	AREA	DUTY LEVEL	LOAD PER ft²	LOAD CALCULATED	LOAD ACTUAL
TCB-24009	TC1-24009	TC-1	Shelves, adj	34.5" x 22.375"	5.36 ft²	3	60 lbs	321.64 lbs	325 lbs
TCB-24009	TC1-24009	TC-1	Fixed shelf	34.5" x 22.375"	5.36 ft²	3	60 lbs	321.64 lbs	325 lbs

TEST SUMMARY

AWI ARCHITECTURAL WOODWORK INSTITUTE

TC-2 Tall Cabinet Structural Integrity Test

Testing was performed in accordance with the AWI Test Methodology TC-2 Tall Cabinet Assembled Unit Test.

DUTY LEVEL **3** Institutional

TC2-24009 Before Testing

OBSERVATIONS:

There was no loss of serviceability or structural integrity of the casework upon completion of the test.

NOTES:

- See specimen Load Summary for testing loads.
- Casework mounted according to enclosed installation guidelines.
- Shelf element was evenly loaded with steel shot bags and steel bar weights to Duty Level 3 load.
- Load remained in place for 24 hours.
- One hour after unloading, the specimen was evaluated.

EQUIPMENT USED:

Digital Level, Tape Measure, Feeler Gauge, Depth Micrometer, Steel Shot Bags

TC2-24009 During Testing

TC2-24009 After Unloading

Load Summary

BATTERY	SPECIMEN	TEST	COMPONENT	DIMENSIONS	AREA	DUTY LEVEL	LOAD PER ft²	LOAD CALCULATED	LOAD ACTUAL
TCB-24009	TC2-24009	TC-2	Fixed shelf	34.5" x 22.375"	5.36 ft²	3	210 lbs	1,125.74 lbs	1,130 lbs

Letter of Affirmation

AWI ARCHITECTURAL WOODWORK INSTITUTE

Affidavit

I, Chris Thompson, declare that the articles listed herein were manufactured by the company above and in accordance with the provided manufacturer/supplier's documented specifications.

Signature: CR

Title: MR Date: 06/28/2024

Test Process Verification

I, Hunter Morrison of Architectural Woodwork Institute, affirm the these tests were conducted in accordance with the described testing methodologies to Performance Duty Level 3 on 07/29/2024 .

Hunter Morrison