

1.0 Scope

The purpose of this test method is to document the performance characteristics of a finishing technology when exposed to common chemical reagents.

2.0 Applicable Documents

2.1 ANSI/AWI 0400 Factory Finishing (latest edition)

2.2 ASTM D1308 (latest edition)

3.0 Significance and Use

Test data will provide useful information for architects, design professionals, and manufacturers in making judgments on the ability of a finishing technology to maintain serviceability under actual operating conditions.

This test method will not determine the useful life of finished architectural woodwork components resulting from the test data obtained. It will, however, indicate finishing technology topcoat performance outcomes from test stress levels.

4.0 Test Fixture

4.1 Main Testing Area

Testing shall be conducted in a well ventilated area with climate control, and on a flat and level horizontal surface larger than the test specimen and of sufficient size to safely perform the test.

5.0 Test Specimen

5.1 Test Specimen

5.1.1 Specimen Materials

The test specimen shall be solid sugar maple (*Acer saccharum*) with a single finishing technology applied in accordance with the manufacturer/supplier's documented instructions and protected from light.

Any additives (e.g. primers or bonding agents) applied to the test specimen in addition to the individual finishing technology being tested shall be disclosed prior to testing.

5.1.2 Specimen Size Requirements

The test specimen shall be a minimum 127 mm x 406 mm [5" x 16"].

5.1.3 Specimen Compliance Confirmation

Test specimens shall be accompanied by a signed affidavit identifying the finishing technology, the finishing technology manufacturer/supplier, and the steps included in preparing the test specimen.

6.0 Conditioning

6.1 Pre-Test Acclimation

Test specimens shall be acclimated in the test facility environment for no less than 72 hours after date of arrival and under conditions in compliance with requirements as established in AWI 200 - Care & Storage (latest edition). Specimen humidity requirements shall be in accordance with ASTM D1308.

6.2 Test Environment

The test facility shall maintain continuous monitoring and an archival record of the facility's indoor environmental conditions in accordance with ASTM D1308 at a minimum of one hour intervals, including:

- Temperature
- Relative humidity

6.2.1 Environmental Condition Log

The official date and time of the Environmental Condition Log (ECL) begins upon receipt of the test specimen and is continuous throughout the acclimation and testing procedures. At the conclusion of the final test procedures, the test specimen's ECL shall cease and be closed with a final environmental close-out log entry.

7.0 Testing Procedure

Test shall be conducted in accordance with ASTM D1308.

Two tests shall be conducted on each test specimen.

Tests shall be conducted on each finishing system with each of the following reagents:

Test Method A:

- Mustard, Yellow
- Vinegar, White Distilled
- Lemon Juice
- Orange Juice
- Ketchup
- Coffee
- Olive Oil
- Red Wine
- 1% Dishwashing Detergent Solution

Test Method B:

- Distilled Water
- Acetone
- Household Ammonia
- Naphtha
- Isopropyl Alcohol
- Glass Cleaner (Butyl Cellosolve-Based)

Testing Methods, CR-1 Chemical Resistance Test

- 33% Sulfuric Acid
- 77% Sulfuric Acid
- Vodka (80 Proof)
- 10% TSP (Diluted in Distilled Water)

7.1 Preparing Test Specimen

The test specimen shall be coated with a finishing technology in accordance with the manufacturer/supplier's documented instructions. All test specimens shall be fully cured in accordance with manufacturer/supplier's recommendations.

7.2 Testing Process

Testing for all reagents shall include two spots of reagent, each measuring .2 milliliters (10 drops) in volume. After remaining in contact with the specimen for the specified duration of the test, each reagent shall be wiped away with a soft, non-abrasive, dye-free wiper (e.g. ULINE S-21157 12x13" white industrial wipers or an equivalent product).

7.2.1 Test Steps and Test Process (Test Method A) Step 1

Testing for all reagents specified as Test Method A shall be left uncovered on the surface of the test specimen.

One spot shall be wiped away after two minutes of contact with the test specimen.

After a period of 24 hours, the second spot shall be wiped away.

7.2.2 Test Steps and Test Process (Test Method B) Step 1

For all reagents specified as Test Method B, one spot of reagent shall be left uncovered on the surface of the test specimen. This spot shall be wiped away after two minutes of contact with the test specimen.

The second spot of reagent shall be covered with a watch glass and be left on the surface of the test specimen for a period of 24 hours.

After a period of 24 hours, the second spot shall be wiped away.

7.2.3 Test Steps and Test Process (Test Methods A and B) Step 2

After reagents are wiped away from the test specimen surface, specimen shall be left to rest for a period of 24 hours.

After the 24-hour resting period has concluded, effects of reagents shall be observed.

8.0 Record of Determination

8.1 Determining Results

Test results shall be determined according to the following chart:

Score of 1	Score of 2	Score of 3	Score of 4	Score of 5
Poor performance; film failure is imminent and repairs difficult	Moderate effect; performance adversely affected and repairs required	Some effect; noticeable change, and the coating will recover with minimal repairs	Minimal effect or slight change; little repair required	No effect from the test

8.2 Nonconformities

All nonconformities shall be identified and deviations recorded.

Deviation measurements greater than the tolerances allowed in the referenced standard shall be deemed as a failure to meet the performance requirements of this test.

9.0 Test Report

The AWI Performance Quality Test Report is the official test report for standard compliance. The results of these findings will be valid for one (1) calendar year from date of report. Conformance to tested methodology is subject to verification to ensure integrity of the product is maintained. Noncompliant verification may result in a suspension of the Test Report. The following information must be submitted to complete the Performance Quality Test Report:

9.1 Test Applicant

- Legal Business Name, Street Address, City, State, ZIP Code and Phone Number

9.2 Independent Testing Laboratory (ITL)

- Legal Business Name, Street Address, City, State, ZIP Code
- Authorizing Signee's Name, Title, Phone, Email
- Testing Laboratory Service Order #, Testing Laboratory Customer ID, Testing Laboratory Battery #, Specimen #
- Date of Specimen Receipt
- Date of Test Performed

9.3 Test Documentation

- All information required for this test methodology

9.4 Material

- Documentation of manufacturer product identification, trade name, chemical name, chemical family, and physical form

9.5 Specimen Dimensions

9.6 Notes, Observations, and Photographs of Specimen

- Before, during, and after test

9.7 Equipment Used to Execute Test

- Calibration documentation (when required)

9.8 Signed Statement of Specimen Affirmation

9.9 Signed Statement of Test Process Verification

9.10 Technical Datasheet of Finish Technology

9.11 MDS of Finish Technology

9.12 Test Specimen's Application Instructions

9.13 Test Specimen's Moisture Humidity Log Record

- Acclimation
- Pre-Test
- Post-Test

9.14 Declaration of Test Methodology Used for This Test

9.15 Signed Statement of Results

No part of this publication shall be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher.



Architectural Woodwork Institute
46179 Westlake Drive, Suite 120, Potomac Falls, VA 20165
Phone: 571-323-3636, Fax: 571-323-3630
www.awinet.org