



Standard Guide for Testing Wood Furniture Lacquers¹

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1. Scope

1.1 This Guide covers the evaluation of gloss or flatted, unpigmented lacquers designed for use on wood substrates. This Guide is to be used in conjunction with Test Methods D 333. Also included are several methods of special relevance to the application of lacquer on wood. The selection of the tests to be used for any given product or system must be governed by experience and by the requirements agreed upon by the producer and user.

1.2 The tests on films apply to those films applied in sufficient quantity to form a continuous film. It is recommended that reports include the thickness of the film under test.

1.3 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- D 235 Specification for Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent)²
- D 1211 Test Method for Temperature-Change Resistance of Clear Nitrocellulose Lacquer Films Applied to Wood³
- D 1308 Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes³
- D 1544 Test Method for Color of Transparent Liquids (Gardner Color Scale)⁴
- D 1644 Test Methods for Nonvolatile Content of Varnishes⁴
- D 2091 Test Method for Print Resistance of Lacquers³
- D 2199 Test Method for Measurement of Plasticizer Migration from Vinyl Fabrics to Lacquers³
- D 3359 Test Methods for Measuring Adhesion by Tape Test⁴

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² Annual Book of ASTM Standards, Vol 06.04.

³ Annual Book of ASTM Standards, Vol 06.02.

⁴ Annual Book of ASTM Standards, Vol 06.01.

D 3459 Test Method for Humid-Dry Cycling for Coatings on Wood and Wood Products³

G 23 Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials⁵

3. Summary of Guide

3.1 This guide lists procedures for evaluating gloss or flatted unpigmented lacquers on production wood panels or wood test substrates.

4. Significance and Use

4.1 This guide is intended to compile as well as provide screening tests in evaluating wood furniture coatings both high gloss and flatted type, as used by the furniture industry.

4.2 Results from these various tests are not necessarily useful in evaluating performance of all different types of furniture finishing systems.

5. Test Panels and Panel Preparation

5.1 Test panels should be regular production finish panels.

5.2 If regular production finish panels are not available, the producer and the user should agree on the substrate to be used and on the complete finishing system.

5.3 Test panels should be aged for seven days unless otherwise designated to ensure complete dry or cure before testing.

6. Nonvolatile Matter

6.1 Test for nonvolatile matter in accordance with Test Methods D 1644, Test Method A.

7. Self-Lifting Properties

7.1 Apply a second coat after the first top-coat has been applied and air dried for 1, 6, and 24 h. Report any tendency of self-lifting.

8. Color

8.1 Test color of the liquid lacquer in accordance with Test Method D 1544.

9. Rubbing Properties

9.1 In the absence of a specified procedure, air dry the lacquer 18 h, sand with No. 320 W/D sandpaper wetted with

⁵ Annual Book of ASTM Standards, Vol 14.02.