



Standard Specification for Adhesives Used for Laminate Joints in Nonstructural Lumber Products¹

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1. Scope

1.1 This specification covers performance levels for adhesives to be used in laminate joints in nonstructural lumber products. Such products include, but are not limited to, interior and exterior mouldings, window and door components or parts, and bonded lumber panels. This specification is to be used to evaluate adhesives as well as the adhesive bonds in nonstructural-glued-lumber products.

NOTE 1—This specification supersedes the laminate-joint portion of Specification D 3110.

NOTE 2—See 3.2.1 and 3.2.2 for descriptions of a dry-use-nonstructural adhesive and a wet-use-nonstructural adhesive.

1.2 This specification applies to laminate-joint specimens made under both laboratory and field conditions. See Section 4 for limitations in using this specification to evaluate industrially manufactured laminate joint products.

1.3 The following safety caveat applies only to the apparatus and test methods portions, Sections 6, 7, 8, and 9 of this specification: *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.*

1.4 The values stated in inch-pound units are to be regarded as standard.

1.5 In this specification, *laminate joint* refers to both face and edge joints.

1.6 The following index is provided as a guide to the test methods in this specification:

	Section
Apparatus	6
Conditioning	7
Material and Preparation of Assemblies and Specimens	8
Exposure Conditions and Treatments	9
Testing, Calculation, and Reporting	10

NOTE 3—The conditioning needed for various stages in the preparation of the specimens and for the exposure tests are given in Sections 7, 8, and 9.

2. Referenced Documents

2.1 ASTM Standards:

- D 905 Test Method for Strength Properties of Adhesive Bonds in Shear by Compression Loading²
- D 907 Terminology of Adhesives²
- D 2016 Methods for Moisture Content of Wood³
- D 2555 Method for Establishing Clear-Wood Strength Values⁴
- D 3110 Specification for Adhesives Used in Nonstructural Glued Lumber Products²
- D 5266 Practice for Estimating the Percentage of Wood Failure in Adhesive Bonded Joints²
- E 4 Practices for Force Verification of Testing Machines⁵
- E 6 Terminology Relating to Methods of Mechanical Testing⁵
- E 41 Terminology Relating to Conditioning⁶
- E 177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods⁶
- E 691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method⁶

3. Terminology

3.1 *Definitions*—Many terms in this specification are defined in Terminologies D 907, E 6, and E 41.

3.1.1 *bond, n*—the union of materials by adhesives.

3.1.2 *laminate joint, n—in wood bonding*, a joint made by bonding layers of adherends face-to-face or edge-to-edge to form thicker or wider stock.

3.1.3 *edge joint, n—in wood bonding*, a type of laminate joint made by bonding adherends edge-to-edge with grain directions parallel to form wider stock.

3.1.4 *face joint, n—in wood bonding*, a type of laminate joint made by bonding adherends face-to-face with grain directions parallel to form thicker stock.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *dry-use nonstructural adhesive, n*—an adhesive capable of producing sufficient strength and durability to make the bonded lumber product serviceable in nonstructural use,

¹ This specification is under the jurisdiction of ASTM Committee D-14 on Adhesives and is the direct responsibility of Subcommittee D14.30 on Wood Adhesives.

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² Annual Book of ASTM Standards, Vol 15.06.

³ Discontinued; see 1988 Annual Book of ASTM Standards, Vol 04.04.

⁴ Annual Book of ASTM Standards, Vol 04.10.

⁵ Annual Book of ASTM Standards, Vol 03.01.

⁶ Annual Book of ASTM Standards, Vol 14.02.