



Designation: D3498 – 19a

Standard Specification for Adhesives for Field-Gluing Wood Structural Panels (Plywood or Oriented Strand Board) to Wood Based Floor System Framing¹

This standard is issued under the fixed designation D3498; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers minimum performance standards and test requirements for gap-filling construction adhesives for bonding wood structural panels consisting of plywood or oriented strand board (OSB) to wood based floor system framing, particularly dimension lumber or wood I-joists, at the construction site.

1.2 This specification provides a basis for ensuring the quality of the adhesives and is not intended as an application specification.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 The following precautionary caveat pertains only to the test method portion, Section 11, 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

¹ This specification is under the jurisdiction of ASTM Committee D14 on Adhesives and is the direct responsibility of Subcommittee D14.70 on Construction Adhesives.

Current edition approved June 1, 2019. Published June 2019. Originally approved in 1976. Last previous edition approved in 2019 as D3498 – 19. DOI: 10.1520/D3498-19a.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

D572 Test Method for Rubber—Deterioration by Heat and Oxygen

D905 Test Method for Strength Properties of Adhesive Bonds in Shear by Compression Loading

D907 Terminology of Adhesives

D4300 Test Methods for Ability of Adhesive Films to Support or Resist the Growth of Fungi

D4442 Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials

D4783 Test Methods for Resistance of Adhesive Preparations in Container to Attack by Bacteria, Yeast, and Fungi

E4 Practices for Force Verification of Testing Machines

E177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods

2.2 Voluntary Product Standards:³

PS1 Structural Plywood

PS2 Performance Standard for Wood-Based Structural-Use Panels

3. Terminology

3.1 Definitions:

3.1.1 Many terms in this specification are defined in Terminology D907.

3.1.2 *gap class, n*—a classification used to indicate whether a product has been qualified using a 1/8 in. (1.59 mm) gap condition.

3.1.3 *gap-filling adhesive, n*—an adhesive capable of forming and maintaining a bond between surfaces that are not close-fitting.

3.1.3.1 *Discussion*—Close-fitting is relative to a given material and industry; for example, standards in construction differ from standards in electronics. Some adhesives will bond by bridging without completely filling the gap; others by filling the gap completely.

3.1.4 *open assembly time, n*—the time interval between applying adhesive on the substrates and closing them together before bonding.

³ Available from National Institute of Standards and Technology (NIST), 100 Bureau Dr., Stop 1070, Gaithersburg, MD 20899-1070, <http://www.nist.gov>.