Designation: D7672 – 14

Standard Specification for Evaluating Structural Capacities of Rim Board Products and Assemblies[1]

This standard is issued under the fixed designation D7672; 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.

INTRODUCTION

Rim board assemblies are an engineered component within light-frame wood platform construction. Rim board assemblies serve in multiple structural capacities, including: providing floor closure and diaphragm attachment, transferring vertical and in-plane lateral loads, restricting out-of-plane rotation and lateral translation at the ends of the floor joists, providing deck ledger attachment, and spanning wall openings as a header material. Rim board products, which serve a principal role as a component integrated within a rim board assembly, can vary by wood species, size, shape, and type. Rim board products and assemblies require evaluation of their mechanical properties, physical properties, and their response to end use environments. Procedures established in this Specification provide a means to test rim board products and assemblies, to judge their acceptability, and to establish allowable design capacities.

1. Scope

1.1 This specification provides procedures for testing and establishing the structural capacities of proprietary rim board products and assemblies for use in light-frame wood construction using I-joist or structural composite lumber joist framing. This specification does not apply to commodity rim board products.

1.2 This specification was developed in light of currently manufactured panel, structural composite lumber, and prefabricated I-joist rim board products as defined in 3.2. Materials that do not conform to the definitions of 3.2 are beyond the scope of this specification.

1.3 Fire safety, sound transmission, building envelope performance, and cutting/notching attributes of rim board products and assemblies fall outside the scope of this specification.

1.4 This specification primarily considers end use in dry service conditions, such as most protected framing members, where the equilibrium moisture content for solid-sawn lumber is less than 16 %.

1.5 This specification provides methods to establish "allowable stress" design resistances for use with the National Design Specification for Wood Construction (NDS). Derivation of design resistances from the test data in accordance with "load and resistance factor design" or "limit states design" are beyond the scope of this specification.

1.6 Quality control requirements are outside the scope of this Specification.

1.7 The performance of a rim board product will be affected by the constituent wood species, geometry, adhesive, and production parameters. Therefore, rim board products produced by each individual manufacturer shall be evaluated to determine their product properties, regardless of the similarity in characteristics to products produced by other manufacturers.

1.8 Where a manufacturer produces product in more than one facility, each production facility shall be evaluated independently. For additional production facilities, any revisions to the full qualification program in accordance with this specification shall be approved by an accredited, independent qualifying agency.

1.9 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.

1.10 *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] This specification is under the jurisdiction of ASTM Committee D07 on Wood and is the direct responsibility of Subcommittee D07.05 on Wood Assemblies.

Current edition approved Oct. 1, 2014. Published November 2014. Originally approved in 2011. Last previous edition approved in 2013 as D7672–13. DOI: 10.1520/D7672–14.

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