



Designation: D5168 – 22

Standard Practice for Fabrication and Closure of Triple-Wall Corrugated Fiberboard Containers¹

This standard is issued under the fixed designation D5168; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 This practice covers the fabrication and closure of new triple-wall corrugated fiberboard containers.

1.2 This practice indicates the factors and components that must be controlled in the manufacture of triple-wall fiberboard containers.

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 *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

- D996 Terminology of Packaging and Distribution Environments
- D1968 Terminology Relating to Paper and Paper Products
- D3950 Specification for Strapping, Nonmetallic (and Joining Methods)
- D3951 Practice for Commercial Packaging

- D3953 Specification for Strapping, Flat Steel and Seals
- D4169 Practice for Performance Testing of Shipping Containers and Systems
- D4675 Guide for Selection and Use of Flat Strapping Materials¹
- D4727/D4727M Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes
- D5330/D5330M Specification for Pressure-Sensitive Tape for Packaging, Filament-Reinforced
- D5486/D5486M Specification for Pressure-Sensitive Tape for Packaging, Box Closure, and Sealing
- D5639 Practice for Selection of Corrugated Fiberboard Materials and Box Construction Based on Performance Requirements
- D6198 Guide for Transport Packaging Design
- SI 10 American National Standard for Use of the International System of Units (SI): The Modern Metric System

2.2 TAPPI Standards:³

- T 411 Test Method for Thickness of Paper and Paperboard
- T 803 Puncture and Stiffness Test of Container Board
- T 810 Bursting Strength of Corrugated and Solid Fiberboard
- T 811 Edgewise Compression Strength of Corrugated Fiberboard (Short Column Test)
- T 812 Ply Separation of Solid and Corrugated Fiberboard (Wet)

2.3 Code of Federal Regulations:⁴

- CFR Parts 107-180 Title 49, Hazardous Materials Regulations

2.4 Other Standards:

- National Motor Freight Classification⁵
- Uniform Freight Classification⁶

¹ This practice is under the jurisdiction of ASTM Committee D10 on Packaging and is the direct responsibility of Subcommittee D10.27 on Fiberboard Shipping Containers, Containerboard and Related Structures and Materials.

Current edition approved April 15, 2022. Published May 2022. Originally approved in 1991. Last previous edition approved in 2017 as D5168 – 12 (2017). DOI: 10.1520/D5168-22.

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.

³ Available from Technical Association of the Pulp and Paper Industry (TAPPI), 15 Technology Parkway South, Norcross, GA 30092, <http://www.tappi.org>.

⁴ Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401, <http://www.access.gpo.gov>.

⁵ Available from National Motor Freight Traffic Association (NMFTA), 1001 N. Fairfax St., Alexandria, VA 22314, <http://www.nmfta.org>.

⁶ Available from Short Line and Regional Railroad Association, 50 F Street, N.W., Suite 7020, Washington, DC 20001-1536.

*A Summary of Changes section appears at the end of this standard