Designation: D5118/D5118M – 15

# Standard Practice for Fabrication of Fiberboard Shipping Boxes[1]

This standard is issued under the fixed designation D5118/D5118M; 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 of new fiberboard boxes, liners and sleeves.

1.2 This practice points out the factors and components that must be controlled in the manufacture of corrugated and solid fiberboard boxes, liners and sleeves.

1.3 This practice does not cover the adequacy of fiberboard containers under all conditions of exposure to atmosphere, handling, shipping and storage.

1.4 The values stated in either inch-pound units or SI units are to be regarded separately as standard. Within the text, the SI units are shown in brackets. The values stated in each system are not exact equivalents; therefore, each system must be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.5 *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:*[2]

D996 Terminology of Packaging and Distribution Environments

D1974 Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes

D2658 Test Method for Determining Interior Dimensions of Fiberboard Boxes (Box Gage Method)

D3950 Specification for Strapping, Nonmetallic (and Joining Methods)

D3951 Practice for Commercial Packaging

D3953 Specification for Strapping, Flat Steel and Seals

D4727/D4727M Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes

2.2 *Federal Specifications:*[3]

CID A-A-59692 Adhesives, Water-Resistant (For Closure of Fiberboard Boxes)

FED-STD-123 Marking for Shipment (Civil Agencies)

MIL-STD-129 Military Marking for Shipment and Storage

2.3 *Code of Federal Regulations:*[3]

Title 49 Transportation

2.4 *Other Publications:*

National Motor Freight Classification[4]

Uniform Freight Classification[5]

Federal Food, Drug and Cosmetic Act[6]

TAPPI 402 Standard Conditioning and Testing Atmospheres for Paper, Board, Pulp Handsheets and Related Products[7]

## 3. Terminology

3.1 Definitions of terms relating to packaging are found in Terminology D996.

## 4. Significance and Use

4.1 Corrugated and solid fiberboard boxes, sleeves and liners are used to unitize products into packages of size and shape suitable for manual or mechanical handling and to protect the contents against environmental, handling, shipping, and storage conditions.

4.2 This practice covers some of the basic constructions and styles of commercially available fiberboard packaging used to unitize and protect contents.

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[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.

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[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 Standardization Documents, Order Desk, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, attn: NPODS.

[4] Available from National Motor Freight Classification, Inc., 2200 Mill Road, Alexandria, VA 22314.

[5] Available from National Railroad Freight Committee, 151 Ellis Street, N.E., Suite 260, Atlanta, GA 30335–6021.

[6] Available from the Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

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

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