



Standard Practice for Fabrication of Fiberboard Shipping Boxes¹

This standard is issued under the fixed designation D 5118/D 5118M; 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 (€) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the 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:

D 685 Practice for Conditioning Paper and Paper Products for Testing²

D 996 Terminology of Packaging and Distribution Environments²

D 3950 Specification for Strapping, Nonmetallic (and Joining Methods)²

D 3951 Practice for Commercial Packaging²

D 3953 Specification for Strapping, Flat Steel and Seals²

D 4727 Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes²

2.2 Federal Specifications:³

MMM-A-250 Adhesives, Water-Resistant (For Closure of Fiberboard Boxes)

PPP-B-638 Packing of Boxes, Caps, Liners, and Sleeves

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

MIL-STD-129 Marking for Shipment and Storage

2.3 Code of Federal Regulations:³

Title 49

2.4 Other Publications:

National Motor Freight Classification⁴

Uniform Freight Classification⁵

Federal Food, Drug and Cosmetic Act⁶

3. Terminology

3.1 Definitions of terms relating to packaging are found in Terminology D 996.

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.

4.3 *Use of Other Specifications*—Nothing in this practice shall be construed to prohibit the use of boxes of special design or of fiberboard packages identified by package number in the current Uniform Freight Classification and National Motor Freight Classification when in the experience and judgement of the purchaser, the nature of the articles or material to be shipped justifies such boxes or packages. Some commodities may require less protection while other commodities may require better boxes than are specified herein. Containers for explosives and dangerous articles must also comply with regulations for the Transport of Hazardous Materials (CFR Title 49).

¹ This practice is under the jurisdiction of ASTM Committee D10 on Packaging and is the direct responsibility of Subcommittee D10.27 on Paper and Paperboard Products.

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² *Annual Book of ASTM Standards*, Vol 15.09.

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, Suite 1120, 222 Riverside Plaza, Chicago, IL 60606.

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