



Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes¹

This standard is issued under the fixed designation D4727/D4727M; 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 reappraisal. A superscript epsilon (ε) indicates an editorial change since the last revision or reappraisal.

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

^{ε1} NOTE—Corrections were made editorially in March 2016.

1. Scope

1.1 This specification covers fiberboard primarily used for the fabrication of boxes and interior details such as pads, sleeves, liners, partitions, die-cut sheets, etc.

1.2 The performance of fiberboard boxes is largely dependent on the paper components from which they are fabricated and, in the case of corrugated boxes, on the flute structure as well. Therefore, a variety of grades reflecting varied performance levels are specified.

1.3 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. See [IEEE/ASTM-SI-10](#) for conversion of units.

1.4 The following safety hazards caveat pertains only to the test portion, Sections 8 and 9, 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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

[D585 Practice for Sampling and Accepting a Single Lot of](#)

¹ This specification 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.

[Paper, Paperboard, Fiberboard, and Related Product \(Withdrawn 2010\)](#)³

[D996 Terminology of Packaging and Distribution Environments](#)

[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 Materials](#)¹

[D5118/D5118M Practice for Fabrication of Fiberboard Shipping Boxes](#)

[D5168 Practice for Fabrication and Closure of Triple-Wall Corrugated Fiberboard Containers](#)

[D5639/D5639M Practice for Selection of Corrugated Fiberboard Materials and Box Construction Based on Performance Requirements](#)

[D6039/D6039M Specification for Open and Covered Wood Crates](#)

[D6199 Practice for Quality of Wood Members of Containers and Pallets](#)

[E162 Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source](#)

[E662 Test Method for Specific Optical Density of Smoke Generated by Solid Materials](#)

[IEEE/ASTM-SI-10 Standard for Use of the International System of Units \(SI\): The Modern Metric System](#)

2.2 TAPPI Standards:⁴

[T 402 Standard Conditioning and Testing Atmosphere](#)

[T 410 Weight per Unit Area \(Basis Weight or Substance\)](#)

[T 411 Thickness \(Caliper\) of Paper and Paperboard](#)

[T 441 Water Absorptiveness of Sized \(Non-Bibulous\) Paper and Paperboard \(Cobb Test\)](#)

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from Technical Association of the Pulp and Paper Industry (TAPPI), 15 Technology Parkway South, Norcross, GA 30092, <http://www.tappi.org>.