



Designation: D7336/D7336M – 22

Standard Test Method for Static Energy Absorption Properties of Honeycomb Sandwich Core Materials¹

This standard is issued under the fixed designation D7336/D7336M; 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.

1. Scope

1.1 This test method determines the static energy absorption properties (compressive crush stress and crush stroke) of honeycomb sandwich core materials. These properties are usually determined for design purposes in a direction normal to the plane of the face sheets (also referred to as the facing plane) as the honeycomb core material would be placed in a structural sandwich construction.

1.2 Permissible core materials are limited to those in honeycomb form.

1.3 This test method is not intended for use in crush testing of stabilized honeycomb core materials (for which the facing plane surfaces of the honeycomb core material are dipped in resin to resist local crushing) or sandwich specimens (for which facings are bonded to the honeycomb core material).

1.4 *Units*—The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

1.4.1 Within the text, the inch-pound units are shown in brackets.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *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.*

¹ This test method is under the jurisdiction of ASTM Committee D30 on Composite Materials and is the direct responsibility of Subcommittee D30.09 on Sandwich Construction.

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2. Referenced Documents

2.1 *ASTM Standards*:²

- C271/C271M Test Method for Density of Sandwich Core Materials
- D883 Terminology Relating to Plastics
- D3878 Terminology for Composite Materials
- D5229/D5229M Test Method for Moisture Absorption Properties and Equilibrium Conditioning of Polymer Matrix Composite Materials
- E4 Practices for Force Calibration and Verification of Testing Machines
- E6 Terminology Relating to Methods of Mechanical Testing
- E18 Test Methods for Rockwell Hardness of Metallic Materials
- E122 Practice for Calculating Sample Size to Estimate, With Specified Precision, the Average for a Characteristic of a Lot or Process
- E177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods
- E456 Terminology Relating to Quality and Statistics

3. Terminology

3.1 *Definitions*—Terminology D3878 defines terms relating to high-modulus fibers and their composites, as well as terms relating to sandwich constructions. Terminology D883 defines terms relating to plastics. Terminology E6 defines terms relating to mechanical testing. Terminology E456 and Practice E177 define terms relating to statistics. In the event of a conflict between terms, Terminology D3878 shall have precedence over the other terminologies.

NOTE 1—If the term represents a physical quantity, its analytical dimensions are stated immediately following the term (or letter symbol) in fundamental dimension form, using the following ASTM standard symbology for fundamental dimensions, shown within square brackets: $[M]$ for mass, $[L]$ for length, $[T]$ for time, $[θ]$ for thermodynamic temperature, and $[nd]$ for non-dimensional quantities. Use of these symbols is restricted to analytical dimensions when used with square brackets, as the symbols may have other definitions when used without the brackets.

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.