



Designation: D8335 – 20

Standard Guide for Identification of Fiber-Reinforced Polymer-Matrix Composite Materials¹

This standard is issued under the fixed designation D8335; 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 guide establishes essential and desirable identification elements for fiber-reinforced composite materials and for fibers, fillers, and core materials, matrices, preforms, prepregs, processes, and parts used in these composite materials. This guide is intended for preparing test reports, databases, and material documents.

1.2 These guidelines are specific to fiber-reinforced polymer-matrix composite materials. Composite materials, which also contain particulates or precipitated particles, are also included, provided they can be described adequately as a filler in the matrix.

1.3 The materials covered by this guide include fibers, both continuous and discontinuous, and fillers of various geometries which are used as reinforcements in composite materials, as well as core materials used in sandwich composites, matrices both thermoset and thermoplastic, fiber preforms, prepreg product forms, manufacturing processes, and generic part forms. Cores may be foam, honeycomb, or naturally occurring materials such as balsa wood. These materials are distinguished from bulk materials by the importance of their specialized geometric forms to their properties. This difference is reflected in the use of geometry, along with chemistry, as a primary basis for classification. Additional data elements that are considered desirable, but not essential, are also defined. The purpose is to allow the meaningful comparison of data from different sources.

1.4 Data elements in this guide are relevant to test data, data as obtained in the test laboratory and historically recorded in laboratory notebooks. Property data, data that have been analyzed and reviewed, may only need a subset of these data elements.

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 appro-*

priate 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.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D1600 Terminology for Abbreviated Terms Relating to Plastics

D3878 Terminology for Composite Materials

D6507 Practice for Fiber Reinforcement Orientation Codes for Composite Materials

IEEE/ASTM SI 10 American National Standard for Metric Practice

2.2 *Other Document:*³

CMH-17 Composite Materials Handbook-17, Revision G or latest

3. Terminology

3.1 *Definitions*—Terminology in accordance with Terminology **D3878** shall be used where applicable.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *data element, n*—one individual piece of information used in describing a material or to record test results.

3.2.1.1 *Discussion*—For example, a variable name, test parameter, and so forth.

3.2.2 *essential data element, n*—a data element in a record which must be completed in order to make the record meaningful in accordance with the pertinent guidelines or standard.

3.2.2.1 *Discussion*—Data elements are considered essential if they are required to make a comparison of property data from different sources meaningful. A comparison of data from

¹ This guide is under the jurisdiction of ASTM Committee **D30** on Composite Materials and is the direct responsibility of Subcommittee **D30.01** on Editorial and Resource Standards.

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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 www.cmh17.org.