



Designation: D8349 – 21

Standard Classification System for and Basis of Specifications for Thermoplastic Joining Interface Materials for Creation of Joints Between Different Materials for the Production of End Items or Parts that are Intended to be Disassembled and/or Reassembled¹

This standard is issued under the fixed designation D8349; 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 classification system covers thermoplastic materials, used as joining materials, for the creation of joints between similar or dissimilar materials, to produce finished products or parts that are intended to be disassembled and/or reassembled.

1.2 This class of materials enables disconnection of the different parts or layers of a products for refurbishing, repair and full recovery and recycling of the joined materials, for instance at the end of life of the product(s), enabling the reuse of valuable resources, and hence reducing adverse impact on the environment.

1.3 The properties included in this classification system are those required to identify the materials covered. It is possible that there are other requirements necessary to identify particular characteristics important to specialized applications. One way of specifying them is by using the suffixes as given in Section 5.

1.4 This classification system and subsequent line callout (specification) are intended to provide a means of calling out plastic materials used in the fabrication of end items or parts. It is not intended for the selection of materials. Material selection is best made by those having expertise in the plastic field after careful consideration of the design and the performance required of the part, the environment to which it will be exposed, the fabrication process to be employed, the costs involved, and the inherent properties of the material other than those covered by this classification system.

1.5 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.6 The following precautionary caveat pertains only to the test methods portion, Section 11, of this classification system. *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.*

NOTE 1—Application examples are fully recyclable mattresses and floor coverings. These products can be disassembled into its different parts, by using heat, for refurbishing, repair and full recovery and recycling of the joined materials at the end of the product's life.

1.7 *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

D618 Practice for Conditioning Plastics for Testing

D883 Terminology Relating to Plastics

D1600 Terminology for Abbreviated Terms Relating to Plastics

D3418 Test Method for Transition Temperatures and Enthalpies of Fusion and Crystallization of Polymers by Differential Scanning Calorimetry

D3892 Practice for Packaging/Packing of Plastics

D4000 Classification System for Specifying Plastic Materials

D5279 Test Method for Plastics: Dynamic Mechanical Properties: In Torsion

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

¹ This test method is under the jurisdiction of ASTM Committee D20 on Plastics and is the direct responsibility of Subcommittee D20.15 on Thermoplastic 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.