



Standard Classification System for Acrylonitrile–Butadiene–Styrene (ABS) Plastics and Alloys Molding and Extrusion Materials¹

This standard is issued under the fixed designation D 4673; 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 only ABS materials and ABS alloys suitable for injection molding and extrusion. Some of these compositions may also be suitable for compression molding. Recycle ABS and alloys will be addressed in a separate standard.

1.2 This classification system is not intended for the selection of materials, but only as a means of calling out materials to be used in the manufacture of parts. Materials are to be selected by personnel with expertise in the plastics field where the economics, the environment to be encountered, the inherent properties of the materials, the part design, the part performance required, and the manufacturing process to be employed all enter into the selection.

1.3 The properties included in this classification system are those required to identify the compositions covered. There may be other requirements necessary to identify particular characteristics important to specialized applications. These will be agreed upon between the user and the supplier by using the suffixes given in Section 5.

1.4 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.5 The following precautionary caveat pertains only to the test methods portion, Section 12, 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 and health practices and determine the applicability of regulatory limitations prior to use.*

NOTE 1—This classification system and ISO 2580 are technically equivalent for those tests contained in both standards.

2. Referenced Documents

2.1 ASTM Standards:

D 256 Test Method for Determining the Pendulum Impact Resistance of Notched Specimens of Plastics²

¹ This classification system 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 Annual Book of ASTM Standards, Vol 08.01.

D 618 Practice for Conditioning Plastics and Electrical Insulating Materials for Testing²

D 638 Test Method for Tensile Properties of Plastics²

D 648 Test Method for Deflection Temperature of Plastics Under Flexural Load²

D 790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials²

D 883 Terminology Relating to Plastics²

D 1003 Test Method for Haze and Luminous Transmittance of Transparent Plastics²

D 1525 Test Method for Vicat Softening Temperature of Plastics²

D 1898 Practice for Sampling of Plastics²

D 1999 Guide for the Selection of Specimens and Test Parameters for International Commerce²

D 2584 Test Method for Ignition Loss of Cured Reinforced Resins³

D 3641 Practice for Injection Molding Test Specimens of Thermoplastic Molding and Extrusion Materials³

D 3892 Practice for Packaging/Packing of Plastics³

D 4000 Classification System for Specifying Plastic Materials³

2.2 ISO Standards:⁴

ISO/DIS 75 Plastics and Ebonite—Determination of Temperatures of Deflection under Load

ISO/DIS 178 Plastics—Determination of Flexural Properties

ISO 180 Plastics—Determination of Izod Impact Strength of Rigid Materials

ISO 291 Plastics—Standard Atmosphere for Conditioning and Testing

ISO/DIS 294 Plastics—Injection Moulding Test Specimen of Thermoplastics Materials

ISO 306 Plastics—Determination of Vicat Softening Temperature

ISO/DIS 527, Parts 1 and 2, Plastics—Determination of Tensile Properties

ISO 2580 Acrylonitrile/Butadiene/Styrene (ABS) Moulding and Extrusion Materials, Part 2

³ Annual Book of ASTM Standards, Vol 08.02.

⁴ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.