



# Standard Classification System for and Basis of Specification for Polyamide Molding and Extrusion Materials (PA)<sup>1</sup>

This standard is issued under the fixed designation D6779; 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.

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

## 1. Scope\*

1.1 This classification system covers polyamide materials suitable for molding and extrusion. Some of these compositions are also suitable for application from solution.

1.2 The properties included in this classification system are those required to identify the compositions covered. Other requirements necessary to identify particular characteristics important to specialized applications are to be specified by using suffixes as given in Section 5.

1.3 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 can be 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.

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

1.5 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 and health practices and determine the applicability of regulatory requirements prior to use.*

NOTE 1—This classification system is similar to ISO 1874-1/-2, although the technical content is significantly different.

<sup>1</sup> 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.

Current edition approved May 1, 2016. Published May 2016. Originally approved in 2002. Last previous edition approved in 2012 as D6779 - 12a. DOI: 10.1520/D6779-16.

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>2</sup>

- D257 Test Methods for DC Resistance or Conductance of Insulating Materials
  - D789 Test Methods for Determination of Solution Viscosities of Polyamide (PA)
  - D792 Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement
  - D883 Terminology Relating to Plastics
  - D1600 Terminology for Abbreviated Terms Relating to Plastics
  - D3892 Practice for Packaging/Packing of Plastics
  - D4000 Classification System for Specifying Plastic Materials
  - D5740 Guide for Writing Material Standards in the Classification Format
  - D6260 Test Method for Gravimetric Determination of Carbon Black in Nylon Materials (PA) (Withdrawn 2004)<sup>3</sup>
  - D7209 Guide for Waste Reduction, Resource Recovery, and Use of Recycled Polymeric Materials and Products (Withdrawn 2015)<sup>3</sup>
  - E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
- ### 2.2 IEC/ISO Standards:<sup>4</sup>
- IEC 60243-1 Electrical Strength of Insulating Materials—Test Methods—Part 1: Tests at Power Frequencies
  - IEC 60250 Recommended Methods for the Determination of the Permittivity and Dielectric Dissipation Factor of Electrical Insulating Materials at Power, Audio and Radio Frequencies Including Metre Wavelengths
  - ISO 75-1 Plastics—Determination of Temperature of Deflection Under Load—Part 1: General Test Methods

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> The last approved version of this historical standard is referenced on [www.astm.org](http://www.astm.org).

<sup>4</sup> Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.