



Standard Classification System for Polyamide Molding and Extrusion Materials (PA)¹

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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 This classification system allows for the use of recycled polyamide materials provided that the requirements as stated in this classification system are met. The proportions of recycled material used, as well as the nature and amount of any contaminant, however, cannot be covered practically in this specification.

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 may be specified 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 should 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.

1.5 The values stated in SI units are to be regarded as the 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 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 1993, although the technical content is significantly different.

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 (Section D20.15.09).

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2. Referenced Documents

2.1 ASTM Standards:

D 257 Test Methods for D-C Resistance or Conductance of Insulating Materials²

D 789 Test Methods for Determination of Relative Viscosity and Moisture Content of Polyamide (PA)³

D 792 Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement³

D 883 Terminology Relating to Plastics³

D 1600 Terminology for Abbreviated Terms Relating to Plastics³

D 3892 Practice for Packaging/Packing of Plastics⁴

D 4000 Classification System for Specifying Plastic Materials⁴

D 6260 Test Method for Gravimetric Determination of Carbon Black in Nylon Materials (PA)⁵

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications⁶

2.2 IEC/ISO Standards:⁷

IEC 60243-1:1998 Electrical Strength of Insulating Materials—Test Methods—Part 1: Tests at Power Frequencies

IEC 60250:1969 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 75-1:1993 Plastics—Determination of Temperature of Deflection Under Load—Part 1: General Test Methods

ISO 75-2:1993 Plastics—Determination of Temperature of Deflection Under Load—Part 2: Plastic and Ebonite

ISO 179-1:2000 Plastics—Determination of Charpy Impact Strength—Part 1: Non-instrumented Impact Test

ISO 294-1:1996 Plastics—Injection Moulding of Test Specimens of Thermoplastic Materials—Part 1: General Principles, Multipurpose-Test Specimens and Bars

² Annual ASTM Book of Standards, Vol 10.01.

³ Annual ASTM Book of Standards, Vol 08.01.

⁴ Annual ASTM Book of Standards, Vol 08.02.

⁵ Annual ASTM Book of Standards, Vol 08.03.

⁶ Annual ASTM Book of Standards, Vol 14.02.

⁷ Available from American National Standards Institute, 25 W. 43rd St., 4th Floor, New York, NY 10036.

*A Summary of Changes section appears at the end of this standard.

