



Designation: D 3935 – 94 (Reapproved 2001)

An American National Standard

Standard Specification for Polycarbonate (PC) Unfilled and Reinforced Material¹

This standard is issued under the fixed designation D 3935; 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 specification covers unfilled and reinforced polycarbonate and polycarbonate copolymer materials suitable for injection molding, blow molding, and extrusion. Some of these compositions may also find use for compression molding or application from solution.

1.2 This specification is not intended for the selection of materials, but only as a means to call out plastic materials to be used for the manufacture of parts. The selection of these materials is to be made by personnel with expertise in the plastics field in which the environment, inherent properties of the materials, performance of the parts, part design, manufacturing process, and economics are considered.

1.3 The properties in this specification are those required for identifying the compositions covered. There may be other requirements necessary for identifying particular characteristics important to specific applications. Those may be specified by using the suffixes in accordance with Section 5.

1.4 The values stated in SI units are to be regarded as the standard.

NOTE 1—This specification is similar to ISO 7391 – 1987 in title only. The technical content is significantly different.

2. Referenced Documents

2.1 ASTM Standards:

D 256 Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics²

D 638 Test Method for Tensile Properties of Plastics²

D 648 Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position²

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

D 792 Test Method for Specific Gravity (Relative Density) and Density of Plastics by Displacement²

D 883 Terminology Relating to Plastics²

D 1238 Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer²

D 1600 Terminology for Abbreviated Terms Relating to Plastics²

D 1897 Practice for Injection Molding Test Specimens of Thermoplastic Molding and Extrusion Materials³

D 2584 Test Method for Ignition Loss of Cured Reinforced Resins⁴

D 3892 Practice for Packaging/Packing of Plastics⁵

D 4000 Classification System for Specifying Plastic Materials⁵

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

E 169 Practices for General Techniques of Ultraviolet–Visible Quantitative Analysis⁷

2.2 ISO Standard:⁸

ISO 7391–1987 Plastics—Polycarbonate Molding and Extrusion Materials (Part 1: Designation—1987) (Part 2: Preparation of Test Specimens and Determination of Properties)

3. Terminology

3.1 *Definitions*—The terminology used in this specification is in accordance with Terminologies D 883 and D 1600. The polycarbonate materials will be designated PC as specified in Terminology D 1600.

4. Classification

4.1 Unfilled polycarbonate materials are classified into groups according to their composition. These groups are subdivided into classes and grades as shown in Table PC

¹ This specification 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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Significant changes to the content of this specification have been made. New grades and recycle grades, recommended molding conditions, an ISO equivalency statement, revised inspection and certification criteria, and a keywords section have all been added. Modifications to the tables have been made to allow the callout of the new materials. Almost every section of the specification has been affected either technically or in an editorial manner.

² *Annual Book of ASTM Standards*, Vol 08.01.

³ Discontinued; see 1990 *Annual Book of ASTM Standards*, Vol 08.01.

⁴ *Annual Book of ASTM Standards*, Vol 08.02.

⁵ *Annual Book of ASTM Standards*, Vol 08.03.

⁶ *Annual Book of ASTM Standards*, Vol 14.02.

⁷ *Annual Book of ASTM Standards*, Vol 14.01.

⁸ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.