



Designation: D3294 – 22

Standard Specification for Polytetrafluoroethylene (PTFE) Resin Molded Sheet and Molded Basic Shapes¹

This standard is issued under the fixed designation D3294; 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 establishes requirements and methods of test for the material, dimensions, and workmanship, and the physical and electrical properties of molded sheet in minimum thicknesses of 0.794 mm ($\frac{1}{32}$ in.) manufactured from PTFE resin molding materials defined in Specification D4894.

1.2 This specification also establishes requirements for molded basic shapes made from molding materials. This specification is for products 300 mm (12 in.) or less in a dimension parallel to and 12.7 mm (0.5 in.) or greater in the dimension perpendicular to the direction of the applied molding pressure.

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

1.4 The following precautionary caveat pertains only to the test method portion, Section 7, of this specification. *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.* Special attention is called to 13.2, 13.3, 13.6, 13.8, and A1.

NOTE 1—There is no known ISO equivalent to this standard.

1.5 *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.*

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 (Section D20.15.12).

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2. Referenced Documents

2.1 ASTM Standards:²

- D149 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies
- D374/D374M Test Methods for Thickness of Solid Electrical Insulation
- D618 Practice for Conditioning Plastics for Testing
- D638 Test Method for Tensile Properties of Plastics
- 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
- D1708 Test Method for Tensile Properties of Plastics by Use of Microtensile Specimens
- D3892 Practice for Packaging/Packing of Plastics
- D4591 Test Method for Determining Temperatures and Heats of Transitions of Fluoropolymers by Differential Scanning Calorimetry
- D4894 Specification for Polytetrafluoroethylene (PTFE) Granular Molding and Ram Extrusion Materials
- D5947 Test Methods for Physical Dimensions of Solid Plastics Specimens
- E94/E94M Guide for Radiographic Examination Using Industrial Radiographic Film
- IEEE/ASTM SI-10 American National Standard for Use of the International System of Units (SI): The Modern Metric System

3. Terminology

3.1 Definitions:

3.1.1 Definitions are in accordance with Terminology D883 unless otherwise specified.

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.

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