



Standard Specification for Polychlorotrifluoroethylene (PCTFE) Extruded Plastic Sheet and Film¹

This standard is issued under the fixed designation D 3595; 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 extruded sheet and film in thicknesses from 0.015 to 0.25 mm (0.0006 to 0.01 in.).

1.2 The values stated in SI units shall be regarded as the standard.

1.3 The following precautionary statement pertains only to the test methods portion, Section 9 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 and health practices and determine the applicability of regulatory limitations prior to use.*

NOTE 1—There is no ISO equivalent specification to this specification.

2. Referenced Documents

2.1 ASTM Standards:

- D 374 Test Methods for Thickness of Solid Electrical Insulation²
- D 618 Practice for Conditioning Plastics and Electrical Insulating Materials for Testing³
- D 882 Test Methods for Tensile Properties of Thin Plastic Sheeting³
- D 883 Terminology Relating to Plastics³
- D 1204 Test Method for Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature³
- D 1430 Specification for Polychlorotrifluoroethylene (PCTFE) Plastics³
- D 1600 Terminology for Abbreviated Terms Relating to Plastics³
- D 1898 Practice for Sampling of Plastics³
- D 3892 Practice for Packaging/Packing of Plastics⁴
- F 1249 Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor³

¹ This specification is under the jurisdiction of ASTM Committee D-20 on Plastics and is the direct responsibility of Subcommittee D20.15 on Thermoplastic Materials (Section D20.15.12).

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² Annual Book of ASTM Standards, Vol 10.01.

³ Annual Book of ASTM Standards, Vol 08.01.

⁴ Annual Book of ASTM Standards, Vol 08.02.

3. Terminology

3.1 Definitions of terms used in this specification shall be in accordance with Terminology D 883.

3.2 Abbreviations are in accordance with Terminology D 1600. PCTFE is the abbreviation for polychlorotrifluoroethylene.

4. Classification

4.1 This specification covers three types of polychlorotrifluoroethylene sheet and film:⁵

4.1.1 *Type I*—Transparent film, with high and low moisture vapor transmission rate.

4.1.2 *Type II*—Dimensionally stable transparent sheet and film with low moisture vapor transmission rate.

4.1.3 *Type III*—Dimensionally stable transparent film with very low moisture vapor transmission rate.

4.1.4 *Type IV*—Low crystalline transparent film with high ductility and extremely low moisture vapor transmission.

4.2 A one-line system may be used to specify materials covered by this specification. The system uses predefined cells to refer to specific aspects of this specification, as illustrated below.

Standard Number Block	Specification				Special Notes
	Type	Grade	Class		
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Example: Specification D 4895 — 89,	I	6	C		

For this example, the line callout would be Specification D 4895 – 89,I6C, and would specify a coagulated dispersion form of polytetrafluoro-ethylene that has all of the properties listed for that Type, Grade, and Class in the appropriate specified properties, tables, or both, in the specification identified. A comma is used as the separator between the Standard Number and the Type. Separators are not needed between the Type, Grade, and Class.⁶ Provision for Special Notes is included so that other information can be provided when required. An example would be in Specification D 3295 – 81a where dimensions and tolerances are specified for each AWG size within Type and Class. When Special Notes are used, they should be preceded by a comma.

⁵ The basic polymer used to make these types of polymer does not correspond to the types given in Specification D 1430.

⁶ See the ASTM *Form and Style Manual*. Available from ASTM Headquarters.