



Standard Specification for E-CTFE-Fluoroplastic Molding, Extrusion, and Coating Materials¹

This standard is issued under the fixed designation D 3275; 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 Department of Defense.

1. Scope *

1.1 This specification covers melt processible molding, extrusion, and coating materials of ethylene-chlorotrifluoroethylene (E-CTFE) fluoroplastics. The resin is a copolymer of ethylene and chlorotrifluoroethylene containing approximately 80 weight % of chlorotrifluoroethylene.

1.2 The values stated in SI units, as detailed in Practice E 380, are to be regarded as the standard.

1.3 The following precautionary statement pertains only to the test methods portion, Section 11 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—Although this specification and ISO 12086-1 (1994) and ISO 12086-2 (1994) differ in approach or detail, data obtained using either are technically equivalent.

2. Referenced Documents

2.1 ASTM Standards:

- D 150 Test Methods for A-C Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials²
- D 618 Practice for Conditioning Plastics and Electrical Insulating Materials for Testing³
- D 638 Test Method for Tensile Properties of Plastics³
- D 792 Test Methods for Specific Gravity (Relative Density) and Density of Plastics by Displacement³
- D 883 Terminology Relating to Plastics³
- D 1238 Test Method for Flow Rates of Thermoplastics by Extrusion Plastometer³
- D 1505 Test Method for Density of Plastics by the Density-Gradient Technique³
- D 1708 Test Method for Tensile Properties of Plastics By

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 20.15.12).

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² Annual Book of ASTM Standards, Vol 10.01.

³ Annual Book of ASTM Standards, Vol 08.01.

Use of Microtensile Specimens³

D 1898 Practice for Sampling of Plastics³

D 2863 Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Plastics (Oxygen Index)⁴

D 3892 Practice for Packaging/Packing of Plastics⁴

D 4591 Test Method for Determining Temperature and Heats of Transitions of Fluoropolymer by Differential Scanning Calorimetry⁵

E 380 Practice for Use of the International System of Units (SI) (The Modernized Metric System)⁶

3. Terminology

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

4. Classification

4.1 This specification covers three types of E-CTFE-fluoroplastic supplied in pellet or powder forms for molding, extrusion, and coatings:

4.1.1 *Type I*—Low melt flow rate.

4.1.2 *Type II*—Medium melt flow rate.

4.1.3 *Type III*—High melt flow rate.

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.

Specification			
Standard Number	:	Type	:
Block	:		:
:	:	:	:
Example: Specification		I	
D 3275 – 97,			

For this example, the line callout would be Specification D 3275 and would specify a low melt flow rate extrusion and molding grade of E-CTFE that has all of the properties listed for that Type in the appropriate tables, or both, in the specification identified. A comma is used as the separator

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.

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