



Designation: D 3295 – 97

Standard Specification for PTFE Tubing¹

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1. Scope *

1.1 This specification covers PTFE tubing manufactured from PTFE resin produced from dispersion specified in Specification D 4895.

NOTE 1—PTFE tube and rod manufactured from resin specified in Specification D 4894 are covered in Specification D 1710.

1.2 The values stated in SI units are to be regarded as the standard. The inch-pound units given in parentheses are for information only.

1.3 The following hazard caveat pertains only to the test method portion, Section 8, 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.*

1.4 There is currently no published ISO standard relating to this specification.

2. Referenced Documents

2.1 ASTM Standards:

- D 618 Practice for Conditioning Plastics and Electrical Insulating Materials for Testing²
- D 792 Test Methods for Specific Gravity (Relative Density) and Density of Plastics by Displacement²
- D 883 Terminology Relating to Plastics²
- D 1505 Test Method for Density of Plastics by the Density-Gradient Technique²
- D 1600 Terminology for Abbreviated Terms Relating to Plastics³
- D 1675 Test Method for Polytetrafluoroethylene Tubing⁴
- D 1710 Specification for Polytetrafluoroethylene (PTFE) Basic Shapes, Rod, and Heavy-Walled Tubing²
- D 1898 Practice for Sampling of Plastics²

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 08.01.

³ Annual Book of ASTM Standards, Vols 08.01 and 08.04.

⁴ Annual Book of ASTM Standards, Vol 10.01.

D 3892 Practice for Packaging/Packing of Plastics⁵

D 4894 Specification for Polytetrafluoroethylene Granular Molding and Ram Extrusion Materials⁶

D 4895 Specification for Polytetrafluoroethylene Resin Produced From Dispersion⁶

E 691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method⁶

3. Terminology

3.1 Definitions:

3.1.1 The terminology given in Terminology D 883 is applicable to this specification.

3.2 Description of Term Specific to This Standard:

3.2.1 *lot*—a collection of units of product from which a sample is to be drawn and inspected to determine conformance with the acceptability criteria, and is to be accepted or rejected as a whole. It may differ from a collection of units designated as a lot for other purposes, for example, production, shipment, etc.

4. Classification

4.1 This specification provides for two types of PTFE tubing differentiated by size schedule as follows:

4.1.1 *Type I*—Tubing based upon the American Wire Gage (AWG) sizes.

4.1.2 *Type II*—Tubing based upon fractional inch sizes.

4.2 The types are further differentiated in accordance with increasing wall thicknesses as follows:

4.2.1 *Grade A*—Tubing having walls tabulated in Table 1 listed as light-weight wall.

4.2.2 *Grade B*—Tubing having walls of greater thickness than Class A listed as thin wall.

4.2.3 *Grade C*—Tubing having walls tabulated in Table 2 listed as standard wall.

4.2.4 *Grade D*—Tubing having walls tabulated in Table 3 listed as chemical tubing.

4.2.5 *Grade E*—Tubing having walls tabulated in Table 2 and Table 3 listed as heavy wall.

4.3 A one-line system may be used to specify materials covered by this specification. The system uses predefined cells

⁵ Annual Book of ASTM Standards, Vol 08.02.

⁶ Annual Book of ASTM Standards, Vol 14.02.

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