



Standard Specification for PTFE Resin Skived Tape¹

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This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers skived tape in thicknesses from 0.013 to 6.35 mm (0.0005 to 0.250 in.) manufactured by skiving (Note 1) from PTFE resin molding and extrusion materials.

NOTE 1—Skiving is the process of continuously shaving a film on a lathe from the outer surface to the core of a molded cylindrical tube of material.

NOTE 2—Abbreviations have been approved from Terminology D 1600.

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

1.3 The following hazard 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 and health practices and determine the applicability of regulatory limitations prior to use.*

NOTE 3—This specification and ISO/FDIS 13000-1 and ISO/FDIS 13000-2 differ in approach or detail, and data obtained using either may not be technically equivalent.

2. Referenced Documents

2.1 ASTM Standards:

- D 149 Test Methods for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies²
- D 374 Test Methods for Thickness of Solid Electrical Insulation²
- D 618 Practice for Conditioning Plastics and Electrical Insulating Materials for Testing³
- D 638 Test Method for Tensile Properties of Plastics³
- D 792 Test Method for Specific Gravity (Relative Density) and Density of Plastics by Displacement³

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 10.02.

³ Annual Book of ASTM Standards, Vol 08.01.

D 882 Test Methods for Tensile Properties of Thin Plastic Sheeting²

D 1389 Methods for Dielectric Proof-Voltage Testing of Thin Solid Electrical Insulating Materials²

D 1505 Test Method for Density of Plastics by the Density-Gradient Technique³

D 1600 Terminology for Abbreviated Terms Relating to Plastics⁴ Microtensile Specimens³

D 1898 Practice for Sampling of Plastics³

D 3892 Practice for Packaging/Packing of Plastics⁵

D 4894 Specification for Polytetrafluoroethylene (PTFE) Granular Molding and Ram Extrusion Materials⁴

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

2.2 ISO Standards:

ISO/FDIS 13000-1 Plastics—Polytetrafluorethylene (PTFE) Semi-Finished Products Part 1: Requirements and Designation⁷

ISO/FDIS 13000-2 Plastics—Polytetrafluorethylene (PTFE) Semi-Finished Products Part 2: Preparation of Specimens and Determination of Properties⁷

3. Classification

3.1 This specification covers four types of PTFE resin skived tape:

3.1.1 *Type I*—Premium; normally used for exacting electrical, mechanical, or chemical applications.

3.1.2 *Type II*—General purpose; for electrical, mechanical, and chemical applications not requiring premium material.

3.1.3 *Type III*—Commercial; for non-critical chemical, electrical, and mechanical applications.

3.1.4 *Type IV*—Utility; having no electrical requirements, and with mechanical properties at lower level.

3.2 Types I, II, III, and IV may be subdivided into two grades according to the base resin used as follows:

3.2.1 *Grade 1*—Made only from virgin resin.

3.2.2 *Grade 2*—May be made using reprocessed resin, or a mixture of virgin and reprocessed resin.

⁴ Annual Book of ASTM Standards, Vols 08.01 and 08.04.

⁵ Annual Book of ASTM Standards, Vol 08.02.

⁶ Annual Book of ASTM Standards, Vol 14.02.

⁷ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.