



Standard Specification for Polytetrafluoroethylene-Backed Pressure-Sensitive Electrical Insulating 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 electrical insulating tape consisting of a polytetrafluoroethylene (PTFE) film coated on one side with a pressure-sensitive adhesive.

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

NOTE 1—This standard is similar to IEC 60454-3-14.

2. Referenced Documents

2.1 ASTM Standards:

D 1000 Test Method for Pressure-Sensitive Adhesive-Coated Tapes Used for Electrical and Electronic Applications²

D 1711 Terminology Relating to Electrical Insulation²

2.2 IEC Standard:

IEC 60454-3 Specifications for Pressure-Sensitive Adhesive Tapes for Electrical Insulation³

3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to Terminology D 1711.

4. Classification

4.1 This specification covers two types of PTFE tape in various thicknesses, as follows:

4.1.1 *Type I*—Standard backing coated with a silicone adhesive:

4.1.1.1 *Grade A*—0.050 mm (0.002 in.) backing thickness, and

4.1.1.2 *Grade B*—0.125 mm (0.005 in.) backing thickness.

4.1.2 *Type II*—Bondable backing tape coated with a silicone adhesive:

4.1.2.1 *Grade A*—0.050 mm (0.002 in.) backing thickness, and

4.1.2.2 *Grade B*—0.125 mm (0.005 in.) backing thickness.

5. Materials and Manufacture

5.1 The tape shall comprise a backing consisting of a film of tetrafluoroethylene polymer on one side of which has been applied a pressure-sensitive adhesive. The backing shall be free of defects such as roughness and holes, and the adhesive layer shall not show defects such as lumps or gels and bare areas. The slit edge of the tape shall be free of defects such as nicks. The adhesive shall not transfer when the tape is unwound from the roll. The product may contain a release liner to assist the unwind and avoid transfer without affecting the adhesion of the tape.

6. Requirements

6.1 All tapes shall meet the requirements given in Table 1 for the grades specified.

7. Standard Rolls

7.1 The standard widths and lengths shall be selected from the following:

7.1.1 Widths:

mm	in.	mm	in.
6	¼	22	⅞
9	⅜	25	1
12	½	30	1¼
15	⅝	38	1½
19	¾	50	2

Widths greater than 50 mm (2 in.) shall be agreed upon between the purchaser and the seller.

7.1.2 Lengths:

m	ft	m	ft
33	108	55	180
50	164	66	216

¹ This specification is under the jurisdiction of ASTM Committee D09 on Electrical and Electronic Insulating Materials and is the direct responsibility of Subcommittee D09.07 on Flexible and Rigid Insulating Materials.

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² *Annual Book of ASTM Standards*, Vol 10.01.

³ Available from the American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.