



Standard Test Methods for Friction Tapes¹

This standard is issued under the fixed designation D69; 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 U.S. Department of Defense.

1. Scope*

1.1 These test methods cover the methods and procedures for testing friction tapes. Such tapes consist of a woven fabric sheeting that has been impregnated with an adhesive insulating compound and cut into rolls of narrow width. These tapes are commonly used for protecting and binding in place, insulation applied to joints of electrical wires and cables, and for other mechanical purposes.

NOTE 1—The material specifications formerly included in these test methods are now contained in Specification [D4514](#).

1.2 The test methods included in this standard are as follows:

	Sections
Adhesion	6 – 11
Aged Adhesion	12 – 17
Breaking Strength	18 – 23
Dielectric Breakdown Voltage	24 – 29
Dimensions	30 – 35
Discoloration of Copper	36 – 40
Parallelism	41 – 45

1.3 The values stated in inch-pound units are the standard. The SI units in parentheses are for information only.

1.4 *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 2—There is no equivalent IEC standard.

2. Referenced Documents

2.1 ASTM Standards:²

[D149](#) Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials

¹ These test methods are under the jurisdiction of ASTM Committee D09 on Electrical and Electronic Insulating Materials and are the direct responsibility of Subcommittee D09.07 on Flexible and Rigid Insulating Materials.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[at Commercial Power Frequencies](#)

[D412](#) Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension

[D1711](#) Terminology Relating to Electrical Insulation

[D4514](#) Specification for Friction Tape

[D5423](#) Specification for Forced-Convection Laboratory Ovens for Evaluation of Electrical Insulation

[D6054](#) Practice for Conditioning Electrical Insulating Materials for Testing (Withdrawn 2012)³

3. Terminology

3.1 Definitions:

3.1.1 For definitions of other terms used in this specification, refer to Terminology [D1711](#).

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *adhesion, n*—the resistance of the tape to unwind itself after being wound up under pressure, in accordance with this test method.

3.2.2 *breaking strength, n*—the force required, per unit width, to break the tape when tested in accordance with this test method.

3.2.3 *conditioning, n*—the exposure of the tape to the influence of a prescribed atmosphere for a stipulated period of time.

3.2.4 *length of tape in a roll, n*—the number of linear yards or metres of tape wound into a roll as measured in accordance with this test method.

3.2.5 *parallelism, n*—the difference in width between two mated ends of a tape that has been split in half, in accordance with this test method.

3.2.6 *tackiness, n*—the adherence of the friction tape surfaces to themselves after light contact has been made, in accordance with this test method.

4. Sampling

4.1 The producer and consumer shall agree upon the number of rolls selected. Unless otherwise specified a minimum of three rolls per lot shall be tested.

³ The last approved version of this historical standard is referenced on www.astm.org.