



Designation: D 4325 – 97

Standard Test Methods for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes¹

This standard is issued under the fixed designation D 4325; 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 These test methods cover the methods and procedures for testing electrically insulating and semi-nonmetallic conducting rubber tapes designed for splicing, terminating, and sheath repair of electrical wire and cable.

1.2 The test methods appear in the following sections:

	Section
Referenced Documents	2
Conditioning	5-6
Dielectric Strength	35-40
Dimensions	11-15
Dissipation Factor	22-26
Elongation	17-21
Heat Exposure	45-47
Fusion	7-10
Ozone Resistance	41-44
Permittivity	22-26
Sample Requirements	4
Tensile Strength	17-21
Volume Resistivity	27-34
Ultraviolet and Weather Resistance	48-51

1.3 The values stated in inch-pound units, except for °C, are the standard. The SI values given in parentheses are for information purposes only.

1.4 Unless otherwise stated, measurements are made on tapes from which the removable separator has been removed.

1.5 *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.* For specific precaution statements see 43.1.

2. Referenced Documents

2.1 ASTM Standards:

D 149 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies²

D 150 Test Methods for A-C Loss Characteristics and

Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials²

D 257 Test Methods for D-C Resistance or Conductance of Insulating Materials²

D 374 Test Methods for Thickness of Solid Electrical Insulation²

D 412 Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers—Tension³

D 470 Test Methods for Crosslinked Insulations and Jackets for Wire and Cable²

D 750 Test Method for Rubber Deterioration in Carbon-Arc Weathering Apparatus³

D 1711 Terminology Relating to Electrical Insulation²

D 4388 Specification for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes⁴

D 4496 Test Method for D-C Resistance or Conductance of Moderately Conductive Materials⁴

E 591 Practice for Safety and Health Requirements Relating to Occupational Exposure to Ozone⁵

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *fusion, n*—that property of rubber tape which causes adjacent layers of tape to become bonded (amalgamated) or adhered together when the tape is stretched and wound upon itself in layers.

SAMPLING

4. Sample and Specimen Requirements

4.1 Unless otherwise required by the detailed product specifications, take the rubber tapes at random from each shipment as follows:

Number of Rolls in Shipment	Number of Sample Rolls
50 to 200	2
201 to 500	3
501 to 1000	4
1001 to 5000	5

¹ These test methods are under the jurisdiction of ASTM Committee D-9 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 *Annual Book of ASTM Standards*, Vol 10.01.

³ *Annual Book of ASTM Standards*, Vol 09.01.

⁴ *Annual Book of ASTM Standards*, Vol 10.02.

⁵ *Annual Book of ASTM Standards*, Vol 11.03.