Designation: D2754 – 10 (Reapproved 2016)

Standard Specification for High-Temperature Glass Cloth Pressure-Sensitive Electrical Insulating Tape[1]

This standard is issued under the fixed designation D2754; 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.

1. Scope*

1.1 This specification covers requirements for high-temperature electrical insulating tape consisting of glass cloth 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 provided for information purposes only.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D1000 Test Methods for Pressure-Sensitive Adhesive-Coated Tapes Used for Electrical and Electronic Applications

D1711 Terminology Relating to Electrical Insulation

3. Terminology

3.1 *Definitions*—For definitions of terms in this specification refer to Terminology D1711.

4. Classification

4.1 This specification covers two types of glass cloth tapes, as follows:

4.1.1 *Type I*—Woven glass cloth with silicone adhesive.

4.1.1.1 *Grade A*—0.18 mm (0.007 in.).

4.1.1.2 *Grade B*—0.25 mm (0.010 in.).

4.1.2 *Type II*—Woven glass cloth impregnated with polytetrafluoroethylene, silicone adhesive, nominal thickness 0.13 mm (0.005 in.).

5. Materials and Manufacture

5.1 The tape backing shall consist of woven glass fibers.

5.2 The silicone pressure-sensitive adhesive coating shall be smooth and uniform and as free from lumps and bare spots as best commercial practice will permit. The adhesive shall not transfer when the tape is unwound from the roll.

6. Requirements

6.1 All tapes shall meet the requirements given in Table 1 for the types 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 2 in. (50 mm) shall be agreed upon between the purchaser and the seller.

7.1.2 *Lengths:*

m	ft
6	20
20	66
33	108

7.1.3 Nonstandard widths and lengths are permissible if agreed upon between the purchaser and seller.

8. Test Methods

8.1 The selection of rolls, conditioning, and testing shall be in accordance with Test Methods D1000.

9. Rejection

9.1 If the test results of any roll do not conform to the requirements prescribed in the specification, two additional rolls shall be selected and tested. If one of the two additional sample rolls also does not conform to the requirements, the lot may be rejected at the option of the purchaser.

[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 Electrical 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.

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

TABLE 1 Detail Requirements

Requirement	Type I		Type II
	Grade A	Grade B	
Total thickness, nominal, mm (in.)	0.18 ± 0.025 (0.007 ± 0.001)	0.25 ± 0.025 (0.10 ± 0.001)	0.13 ± 0.025 (0.005 ± 0.001)
Width, as specified, mm (in.)	±0.8 (±1/32)	±0.8 (±1/32)	±0.8 (±1/32)
Length, as specified	−1%	−1%	−1%
Breaking strength, min, avg N/10 mm (lbf/in.)	216 (120)	216 (120)	90.2 (50)
Dielectric breakdown, min, avg V	2000	2500	3000
Adhesion strength, min, N/10 mm (ozf/in.)			
To steel	2.8 (25)	2.8 (25)	2.2 (20)
To backing	1.7 (15)	1.7 (15)	no requirement
High-humidity insulation resistance, min, median, MΩ	50	100	1000
Unwind force, max, avg, N/10 mm (ozf/in.) width	11.0 (100)	16.5 (150)	11.0 (100)
Accelerated aging, effect of on dielectric breakdown, percent of original after 16 h at 250 °C, min	100	100	100
Adhesion strength to backing, % of original after 168 h at 225 °C, min	100	100	no requirement

10. Packaging and Package Marking

10.1 *Packaging*—The packaging shall withstand shipment and shall give the product ample protection against damage. The individual rolls shall not adhere to each other or to the container.

10.2 *Marking*—Each package shall be marked with the name of the manufacturer, the ASTM specification number and type, and the width and length of the rolls.

11. Keywords

11.1 electrical insulating tape; glass cloth pressure-sensitive tape; high temperature pressure-sensitive tape; pressure-sensitive adhesive tape

SUMMARY OF CHANGES

Committee D09 has identified the location of selected changes to this standard since the last issue (D2754 – 99 (2004)) that may impact the use of this standard. (Approved May 1, 2010.)

(1) Revised Table 1.