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An American National Standard

Standard Test Methods for Coated Fabrics[1]

This standard is issued under the fixed designation D 751; 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 are applicable, but not limited to, rubber-coated fabrics, that is, tarpaulins, rainwear, and similar products.

1.2 The scope of each of these test methods appears in the section in which the test method is described.

1.3 The test methods appear in the following sections:

Test Method	Section
Dimensions and Mass	7-10
Breaking Strength	11
Procedure A—Grab Test Method	12-15
Procedure B—Cut Strip Test Method	16
Elongation	17
Bursting Strength	18-21
Puncture Resistance	22-25
Tearing Strength	26
Procedure A—Pendulum Method	27-32
Procedure B—Tongue Tear Method	33-36
Trapezoidal Tear	37-40
Hydrostatic Resistance	41
Procedure A—Mullen Type Tester	42-45
Procedure B—Rising Water Column Tester	46-49
Adhesion Coating (to Fabrics)	50-53
Strength of Coating	54-58
Tack-Tear Resistance	59-63
Low Temperature Bend Test	64
Low Temperature Impact Test	65
Low-Temperature Crack Resistance	66-70
Seam Strength	71-76
Accelerated Heat Aging (Oven Method)	77-84
Dead Load Seam Strength	85-88
Blocking Resistance at Elevated Temperatures	89-93
Crush Resistance	94-98
Wicking of Coated Cloth	99-103

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

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.*

2. Referenced Documents

2.1 *ASTM Standards:*

D 573 Test Method for Rubber—Deterioration in an Air Oven[2]

D 1349 Practice for Rubber—Standard Temperatures for Testing[2]

D 1424 Test Method for Tearing Strength of Fabrics by Falling-Pendulum Type (Elmendorf) Apparatus[3]

D 2136 Test Method for Coated Fabrics—Low-Temperature Bend Test[2]

D 2137 Test Methods for Rubber Property—Brittleness Point of Flexible Polymers and Coated Fabrics[2]

D 4483 Practice for Determining Precision for Test Method Standards in the Rubber and Carbon Black Industries[2]

3. Significance and Use

3.1 Coated fabrics and rubber products made from coated fabrics are important items of commerce, and adequate test methods must be available to ensure the quality of these products. These test methods provide for this testing capability.

4. Standard Conditions

4.1 *Test Conditions*— Coated fabrics shall be tested in an environment satisfying the conditions as defined in 4.2 or 4.3 unless otherwise specified, or as per agreement between supplier and purchaser. When it is known that the coated fabric is to be used in a tropical environment, the atmosphere described in 4.3 shall be specified.

4.2 *Temperate Atmosphere*—The standard condition for testing coated fabrics shall be that reached by the fabric when in moisture equilibrium with a standard atmosphere having a relative humidity of 50 ± 5 % at 23 ± 2°C (73± 4°F).

4.3 *Tropical Atmosphere*—The standard condition for testing coated fabrics shall be that reached by the fabric when in moisture equilibrium with a standard atmosphere having a relative humidity of 65 ± 5 % at 27 ± 2°C (80± 2°F).

4.4 *Moisture Equilibrium*—It shall be considered that moisture equilibrium is reached when after free exposure to air in

[1] These test methods are under the jurisdiction of ASTM Committee D11 on Rubber and are the direct responsibility of Subcommittee D11.37 on Coated Fabrics and Rubber Thread.

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[2] *Annual Book of ASTM Standards*, Vol 09.01.

[3] *Annual Book of ASTM Standards*, Vol 07.01.

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