



Designation: D6614 – 07

Standard Test Method for Stretch Properties of Textile Fabrics – CRE Method¹

This standard is issued under the fixed designation D6614; 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 test method covers the determination of the amount of fabric stretch and fabric growth after a specified extension and held for a specified time.

1.2 While this method can be used for any fabric, knit fabrics having high stretch are better measured by test method [D2594](#).

1.3 This test method should not be used to measure the breaking strength and elongation of woven fabrics, which is covered in Test Methods [D5034](#) and [D5035](#).

1.4 The values listed in either SI units or inch-pound units are to be regarded separately as the standard. Within the text, the inch-pound units are shown in parentheses. The values stated in each system are not exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in nonconformance with specification.

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:*²

[D123 Terminology Relating to Textiles](#)

[D1776 Practice for Conditioning and Testing Textiles](#)

[D2594 Test Method for Stretch Properties of Knitted Fabrics Having Low Power](#)

[D4849 Terminology Related to Yarns and Fibers](#)

[D4850 Terminology Relating to Fabrics and Fabric Test Methods](#)

[D5034 Test Method for Breaking Strength and Elongation of Textile Fabrics \(Grab Test\)](#)

[D5035 Test Method for Breaking Force and Elongation of Textile Fabrics \(Strip Method\)](#)

3. Terminology

3.1 For all terminology relating to [D13.59, Fabric Test Methods, General](#), refer to Terminology [D4850](#).

3.2 For all terminology related to [D13.58, Yarns and Fiber](#), see Terminology [D4849](#).

3.2.1 The following terms are relevant to this standard: fabric stretch, fabric growth, stretch yarn.

3.3 For all other terminology related to textiles, refer to Terminology [D123](#).

4. Summary of Test Method

4.1 *Fabric Stretch and Fabric Growth*— A specified load is applied to a fabric specimen, using a constant rate of extension tensile tester at a prescribed rate of extension. After holding at the specified load for a predetermined time, the length is measured. The load is removed from the specimen and allowed to relax for a specified time. A small amount of force, enough to remove any wrinkles or folds, is applied and the specimen length measured. The amount of fabric stretch is calculated from the difference in length prior to load and under load. Fabric growth is calculated from the difference in length prior to loading and after relaxation.

5. Significance and Use

5.1 This method is used to determine the stretch and growth properties which a garment made of the fabric may be expected to exhibit during use.

5.2 This is a new method and therefore the history of data is very small, however the excellent agreement of between-laboratory data suggest this method may be considered for acceptance testing of commercial shipments.

5.2.1 If there are differences of practical significance between reported test results for two laboratories (or more), comparative test should be performed to determine if there is a statistical bias between them, using competent statistical assistance. As a minimum, samples used for such comparative tests should be as homogeneous as possible, drawn from the same lot of material as the samples that resulted in disparate results during initial testing, and randomly assigned in equal numbers to each laboratory. Other fabrics with established test values may also be used for these comparative tests. The test results

¹ This test method is under the jurisdiction of ASTM Committee [D13](#) on Textiles and is the direct responsibility of Subcommittee [D13.59](#) on Fabric Test Methods, General.

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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.