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Standard Test Methods for RELAXATION AND CONSOLIDATION DIMENSIONAL CHANGES OF STABILIZED KNIT WOOL FABRICS¹

This standard is issued under the fixed designation D 1284; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 These test methods cover the accelerated determination of the relaxation and the consolidation dimensional change of knit fabrics that include at least 50 % wool, and are designed to be shrink-resistant. The knit fabrics to be tested by these methods include those used in manufacturing underwear, outerwear, and sweaters.

1.2 The methods appear in the following sections:

	Sections
Relaxation Dimensional Change	6 to 13
Consolidation Dimensional Change	14 to 21

1.3 The values stated in SI units are to be regarded as the standard.

1.4 *This standard may involve hazardous materials, operations, and equipment. This standard does not purport to address all of the safety problems 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 123 Terminology Relating to Textiles²D 1776 Practice for Conditioning Textiles for Testing²D 1905 Test Method for Dimensional Changes in Laundering of Woven or Knitted Textiles³

2.2 Other Documents:

Fed. Std. No. 751a Stitches, Seams, and Sewing⁴

ISO Method 38/2 N79 Dimensional Changes (Shrinkage), Felting and Relaxation, of

Woven of Knitted Wool Textiles⁵ISO Method 38/2 N100 Dimensional Change in Wetting⁵

3. Definitions

3.1 *consolidation dimensional change, n*—the dimensional change that occurs when a knitted fabric is gently agitated in water to overcome all the frictional constraints in the fabric after it has been immersed in water without agitation to cause the relaxation dimensional change.

3.2 *felting dimensional change, n*—the irreversible dimensional change that occurs in a relaxed fabric when it is subjected to agitation in laundering as specified in Test Method D 1905.

3.3 *frictional constraint, n*—the force imposed by the multitude of fiber to fiber contacts within a fabric.

3.4 *relaxation dimensional change, n*—the dimensional change that occurs when a knitted fabric is immersed in water without agitation and the strains and tensions put into fibers, yarns, or fabrics during previous processing stages such as spinning, knitting, and finishing are relieved.

3.5 For definitions of other textile terms used in these test methods, refer to Terminology D 123.

¹ These test methods are under the jurisdiction of ASTM Committee D-13 on Textiles, and are the direct responsibility of Subcommittee D13.59 on Fabric Test Methods, General.

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² Annual Book of ASTM Standards, Vols 07.01 and 07.02.

³ Discontinued, see 1977 Annual Book of ASTM Standards, Part 32.

⁴ Fed. Std. No. 751a, Jan. 25, 1965, superseding Federal Specification DD-S-751. Available from Naval Publications and Forms Center, 5801 Tabor Ave., PA 19120.

⁵ Available from American National Standards Institute, 1430 Broadway, New York, NY 10018.