Designation: D 3775 – 98

Standard Test Method for Fabric Count of Woven Fabric[1]

This standard is issued under the fixed designation D 3775; 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 measurement of fabric count and is applicable to all types of woven fabrics.

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

1.3 *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 123 Terminology Relating to Textiles[2]

D 1776 Practice for Conditioning Textiles for Testing[2]

2.2 *Other Standard:*

ANSI/ASQC Z1.4—Inspection by Attributes[3]

3. Terminology

3.1 *Definitions:*

3.1.1 *count, n—in woven textiles,* the number of warp yarns (ends) and filling yarns (picks) per unit distance as counted while the fabric is held under zero tension, and is free of folds and wrinkles.

3.1.2 For definitions of other textile terms used in this test method, refer to Terminology D 123.

4. Summary of Test Method

4.1 The number of warp yarns (ends) per unit distance and filling yarns (picks) per unit distance are determined using suitable magnifying and counting devices or by raveling yarns from fabrics.

5. Significance and Use

5.1 This test method is considered satisfactory for acceptance testing of commercial shipments because of prior extensive use.

5.1.1 In case of a dispute arising from differences in reported test values when using Test Method D 3775 for acceptance testing of commercial shipments, the purchaser and the supplier should conduct comparative tests to determine if there is a statistical bias between their laboratories. Competent statistical assistance is recommended for the investigation of bias. As a minimum, the two parties should take a group of test specimens which are as homogeneous as possible and which are from a lot of material of the type in question. The test specimens should then be randomly assigned in equal numbers to each laboratory for testing. The average results from the two laboratories should be compared using appropriate statistical analysis for unpaired data and an acceptable probability level chosen by the two parties before testing is begun. If a bias is found, either its cause must be found and corrected or the purchaser and the supplier must agree to interpret future test results with consideration of the known bias.

6. Apparatus

6.1 Use any suitable device, such as pick glass, rule and pointer, microfilm reader, or projection equipment.

6.2 Use a scale graduated in mm (1⁄16 in.) to measure the length of fabric to be ravelled for a count of yarns.

7. Sampling

7.1 *Lot Sample*—As a lot sample for acceptance testing, take at random the number of rolls of fabric as directed in an applicable material specification or other agreement between the purchaser and the supplier. Consider rolls of fabric to be the primary sampling units.

7.2 *Laboratory Sample*—As a laboratory sample, take a full width swatch at least 2 m (2 yd) long from each roll of fabric in the lot sample. Consider each point at which fabric counts are made as a test specimen.

NOTE 1—For specimens not obtained as directed in Section 7, the results should not be used for acceptance testing of a lot.

8. Conditioning

8.1 Condition specimens as directed in Practice D 1776.

8.2 Fabrics woven from yarns having a relatively low moisture regain in the standard atmosphere for testing textiles, which is 21° ± 1 C (70° ± 2 F) and 65 % relative humidity,

[1] This test method is under the jurisdiction of ASTM Committee D-13 on Textiles and is the direct responsibility of Subcommittee D 13.60 on Fabric Test Methods, Specific.

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

[3] Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.