



Standard Practice for Evaluation of the Performance of Soft Window Coverings¹

This standard is issued under the fixed designation D 4720; 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 practice covers the evaluation of specific performance characteristics of any washable or drycleanable soft window covering.

1.2 This practice is not a specification for washable or drycleanable soft window coverings but may be used by mutual agreement between the purchaser and the supplier to establish material specifications.

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 Textiles²

D 1683 Test Method for Failure in Sewn Seams of Woven Fabrics²

D 1776 Practice for Conditioning Textiles for Testing²

D 3136 Terminology for Permanent Care Labels for Consumer Textile and Leather Products Other Than Carpet and Upholstery²

D 3691 Performance Specification for Woven, Lace, and Knit Household Curtain and Drapery Fabrics³

D 3773 Test Methods for Length of Woven Fabric³

D 3940 Test Method for Bursting Strength (Load) and Elongation of Sewn Seams of Knit or Woven Stretch Textile Fabrics³

2.2 AATCC Methods:⁴

AATCC 88B Appearance of Seams in Durable Press Items after Repeated Home Laundering

AATCC 135 Dimensional Changes in Automatic Home Laundering of Woven and Knit Fabrics

AATCC 143 Appearance of Apparel and Other Textile End Products after Repeated Home Laundering

AATCC 158 Dimensional Changes on Drycleaning in Perchloroethylene: Machine Method

3. Terminology

3.1 Definitions:

3.1.1 *soft window coverings, n*—curtains, draperies, or other accessories on wall or window openings that are either lined or unlined and primarily constructed of textile fabrics.

3.1.1.1 *Discussion*—Washable soft window coverings include those that can be refurbished by any procedure in which the cleaning solvent is water. Drycleanable soft window coverings include those that should be refurbished by any procedure in which the cleaning solvent is primarily nonaqueous and used in drycleaning.

3.2 For definitions of textile terms used in this practice refer to Terminology D 123 and Terminology D 3136.

4. Significance and Use

4.1 This practice may be used to evaluate pertinent performance characteristics of washable and drycleanable soft window coverings, whether lined or unlined.

4.1.1 Soft window covering characteristics to be evaluated prior to repeated refurbishing include, but are not limited to, seam strength and appearance, uniformity of shade (part to part), and size consistency (side to side and part to part).

4.1.2 Soft window covering characteristics to be evaluated after repeated refurbishing include, but are not limited to, colorfastness, dimensional change, seam strength, appearance, and compatibility of components. Compatibility of dimensional change between drapery fabric and lining should be noted.

4.2 The specified home laundry machine settings do not reflect advances in cycle design or special features of washer and dryers which enhance the performance of these products. The standard washing and drying procedure reflects the minimum capabilities of current home laundering equipment used by consumers in accordance with care label instructions.

4.2.1 The reproducibility of the results of the test method specified in 9.2 depends on the use of procedures for automatic home laundering as specified on care labels.

4.3 The areas to be evaluated and the criteria assigned to these areas shall be set by mutual agreement between purchaser and supplier.

5. Sampling, Selection, and Number of Specimens

5.1 *Division into Lots*—For acceptance testing, divide the product into lots as agreed upon by the purchaser and the supplier.

¹ This practice is under the jurisdiction of ASTM Committee D-13 on Textiles and is the direct responsibility of Subcommittee D13.63 on Home Furnishings.

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

³ *Annual Book of ASTM Standards*, Vol 07.02.

⁴ Available from American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709.

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

NOTE 1—A realistic specification or other agreement between the purchaser and the supplier requires taking into account the variability between shipping cartons, between items within a carton, and between specimens within an item so as to provide a sampling plan which has a meaningful producer's risk, consumer's risk, acceptable quality level, and limiting quality level.

5.3 *Laboratory Sample*—As a laboratory sample for acceptance testing, take two random items from each shipping carton in the lot sample.

5.4 *Test Specimens*—Take test specimens from each item in the laboratory sample as directed in the individual test methods. Perform each test on the product as it will reach the consumer.

CHARACTERISTICS AND TEST METHODS

6. Characteristics

6.1 The areas to be evaluated and the criteria assigned to those areas shall be set by mutual agreement between purchaser and supplier.

7. Fabric Performance Characteristics

7.1 The fabric in the item shall be evaluated as directed in Specification D 3691.

8. Product Performance Characteristics Prior to Refurbishing

8.1 Seam performance shall be evaluated as directed in Test Method D 1683 (for woven) or Test Method D 3940 (for knit) and in AATCC Method 88B, as appropriate.

8.2 Mark and record measurements as directed in Section 11 of this practice to establish size consistency, side to side and part to part, and as a basis for determining dimensional changes.

8.3 Examine the soft window coverings for unacceptable shade difference from part to part, using a commercially available laboratory light source as agreed upon by purchaser and supplier.

8.4 Examine soft window coverings for any other pertinent defects.

9. Refurbishing Conditions

9.1 *Laundering*:

9.1.1 Launder soft window coverings as directed in AATCC Method 135 as in the permanently attached care label instructions. Use laundering temperatures as directed in AATCC Method 135.

9.1.2 Any domestically available detergent, as agreed upon by purchaser and supplier, may be used.

9.1.3 When chlorine bleach is to be used, introduce one cup of any liquid chlorine household bleach containing 5.25 % sodium hypochlorite (5 % available chlorine) into the washer in the manner directed on the bleach container. When testing with non-chlorine bleach is indicated, introduce it into the washer in the amount and manner directed on the bleach container.

9.1.4 Dry items following care label instructions or as directed in AATCC Method 135.

9.1.5 When ironing is to be done, follow the method indicated on the care label or as directed in AATCC Method 135.

9.1.6 Repeat the complete cycle four more times or as agreed upon by purchaser and supplier.

9.2 *Drycleaning*:

9.2.1 Dryclean soft window coverings as directed in AATCC Method 158 or in the permanently attached care label instructions.

9.2.2 Repeat the procedure two or more times as agreed upon by purchaser and supplier.

10. Soft Window Coverings Performance Characteristics After Refurbishing

10.1 Remeasure as directed in Section 11. Record measurements and calculate dimensional change using measurements previously obtained in 8.2. Dimensional change may be expressed as a percentage using the following equation:

$$D = 100 (A - B)/B$$

where:

D = dimensional change, %,

B = measurement before refurbishing, mm (in.), and

A = measurement of same dimension after refurbishing, mm (in.).

NOTE 2—A negative dimensional change indicates shrinkage and positive dimensional change indicates growth.

10.2 Examine soft window coverings for unacceptable shade difference from part to part, as directed in 8.3 and for any other pertinent defects after refurbishing as directed in 8.4.

10.3 Evaluate soft window coverings for appearance of all seams in accordance with AATCC Method 88B. Acceptable performance requirements should be as agreed between purchaser and supplier.

10.4 Evaluate durable press items for appearance as directed in AATCC Method 143. Acceptable performance requirements should be by agreement between purchaser and supplier.

10.5 Examine soft window coverings for any other pertinent defects.

11. Measuring Soft Window Coverings

11.1 Expose the item to standard textile conditions for at least 4 h.

11.2 When necessary, mark the dimension to be measured with a suitable marking device.

11.3 Unless otherwise set by mutual agreement between purchaser and supplier, make original measurement marks at the locations according to Fig. 1, as follows:

11.3.1 Measure length of soft window coverings at each side of each panel, and in the middle of the panel, including ruffles, flounces and trims. Measure each panel separately ($A - A$, Fig. 1).

11.3.2 Measure width of soft window coverings at top, middle, and bottom (if it is a pinch pleated item, then measure the heading only, including all ruffles, flounces and trims). Measure each panel separately ($B - B$, Fig. 1).

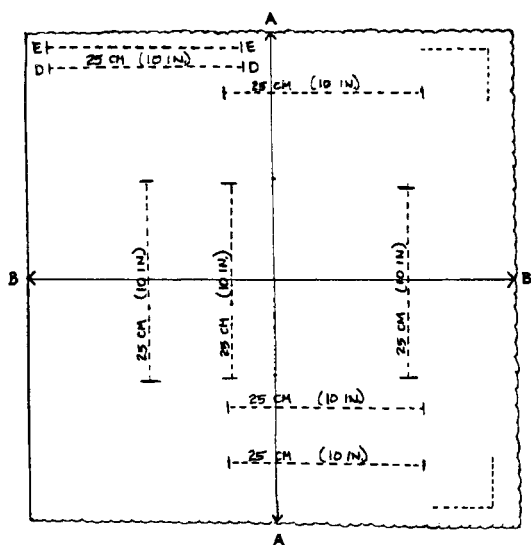


FIG. 1 Diagram of Typical Soft Window Covering

used to facilitate better precision of measuring, so use this measurement if the product is large enough.

NOTE 3—When actual length and width measurements are made, the tolerances shall be to the nearest 1 mm ($\frac{1}{16}$ in.). When gage marks are used, the measurement tolerances should be supplied by the gage manufacturer. See Test Methods D 3773.

REPORTING AND CONFORMANCE

12. Report

12.1 State that the specimens were tested as directed in Practice D 4720. Describe the type of fabrics and the type of items tested and report the following information.

- 12.1.1 Objective of the test.
- 12.1.2 Description and identification of product(s).
- 12.1.3 Method of sampling.
- 12.1.4 Number of specimens tested.
- 12.1.5 List of performance characteristics evaluated and the results of each.
- 12.1.6 Specifics of any departures from a standard test method agreed upon by the purchaser and the supplier.
- 12.1.7 Conclusion, if appropriate.

13. Conformance

13.1 When the purchaser and supplier have agreed upon specific requirements for the characteristics that are to be considered, soft window coverings that fail to meet these requirements may be rejected. Rejection should be reported to the supplier in writing. In case of disagreement with results of the test, the supplier may make claim for a retest.

14. Keywords

14.1 appearance; dimensional change; drycleaning; laundering; window coverings

11.3.3 Mark the inner edge of ruffle or flounce where attached to item with 25-cm (10-in.) or 91.4-cm (36-in.) gage marks (D – D, Fig. 1). Permitting all fullness to remain, mark the outer edge of the ruffle or flounce with corresponding gage marks (E, Fig. 1). Measure the full fabric width between second set of gage marks (E – E, Fig. 1).

11.3.4 On one panel of fabric, excluding ruffles and flounces, on both face and back of the product, mark off with a suitable marking device, three 25-cm (10-in.) gage marks parallel to the length of the fabric, and three 25-cm (10-in.) gage marks parallel to the width of the fabric to the nearest 0.25 cm (0.1 in.). Each set of the gage marks must be at least 5.0 cm (2 in.) from all edges of the panel and approximately 12 cm (5 in.) apart. Bench marks of 50 cm (20 in.) are commonly

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