



Standard Test Methods for Visually Inspecting and Grading Fabrics¹

This standard is issued under the fixed designation D 5430; 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 These test methods describe a procedure to establish a numerical designation for grading of fabrics from a visual inspection.

1.2 These test methods may be used for the delivery and acceptance of fabrics with requirements mutually agreed upon by the purchaser and the supplier.

1.3 *This standard does not purport to address all of the safety problems, 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 2905 Practice for Statements on Number of Specimens for Textiles²

D 3990 Definition of Terms Relating to Fabric Defects^{3,4}

2.2 ANSI Standards:⁵

ANSI/ASQC Standard A1-1978 Definitions, Symbols, Formulas, and Tables for Control Charts

ANSI/ASQC Standard Z1.4-1981 Sampling Procedures and Tables for Inspection by Attributes.

2.3 MIL Standard:⁶

MIL-STD-105D Sampling Procedures and Tables for Inspection by Attributes

3. Terminology

3.1 Definitions:

3.1.1 *critical defect, n*—a serious defect that judgment and experience indicate is likely to prevent the usability or proper performance of a product from its intended purpose.

3.1.2 *defect, in inspection and grading, n*—the departure or non-conformance of some characteristic from its intended level or state.

3.1.2.1 *Discussion*—In inspection and grading the characteristic is a visual one.

3.1.3 *grade, v*—to assign a numerical value based on the number, size, and severity of defects seen during a visual inspection.

3.1.4 *inspection, n*—the process of measuring, examining, testing, gaging, or otherwise comparing a characteristic or property of a material with applicable requirements. In this case only by visual examination.

3.1.5 *major defect, n*—a defect other than critical, that judgment and experience indicate is likely to materially reduce the usability of a product for its intended purpose.

3.1.6 *minor defect, n*—a defect that is not likely to materially reduce the usability of the product from its intended purpose, or is a departure from established standards having little bearing on the effective use of operation of a product.

3.1.7 For definitions of other textile terms used in this test method, refer to Terminology D 123 and D 3990.

4. Summary of Test Method

4.1 Rolls or bolts of fabric are visually inspected and individually graded at an examination station using an agreed upon point system.

4.2 Fabric is normally inspected and graded on one side only. Certain types of end use fabrics may be inspected and graded on both sides as agreed upon between the purchaser and supplier.

5. Significance and Use

5.1 Test Method D 5430 is considered satisfactory for acceptance testing a commercial shipments since the method has been used extensively in the trade for grading of fabric and fabric acceptance determination.

5.2 The penalty points obtained in grading the same rolls or bolts of fabric may vary considerably when using each of the three options listed herein. For this reason, the same point assignment option should be used in cases of disagreement arising from differences of values reported by the purchaser and the supplier.

6. Apparatus

6.1 A suitable fabric inspection machine providing a flat

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

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

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

⁴ American Apparel Manufacturers Association, 1611 N. Kent Street, Arlington, Virginia 22209.

⁵ American Society for Quality Control, 310 W. Wisconsin Ave., Milwaukee, WI 53203.

⁶ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.