Designation: D6613 – 08 (Reapproved 2013)

Standard Practice for Determining the Presence of Sizing in Nylon or Polyester Fabric[1]

This standard is issued under the fixed designation D6613; 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 Using a color scale of 1 to 5, this practice describes the procedures for determining the presence and relative amount of sizing in fabrics made of undyed nylon or non-cationically dyeable polyester yarns prepared with a cationically dyeable sizing

1.2 Procedures and apparatus other than those stated in this standard may be used by agreement of purchaser and supplier with the specific deviations from the standard acknowledged in the report.

1.3 *This practice may involve hazardous materials, operations, and equipment. This practice 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 practice 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

D6799 Terminology Relating to Inflatable Restraints

2.2 *American Association of Textile Chemists and Colorists (AATCC):*

AATCC AATCC Evaluation Procedure # 8 [3]

3. Terminology

3.1 *Definitions:*

3.2 For all terminology relating to D13.20, Inflatable Restraints, refer to Terminology D6799.

3.2.1 The following terms are relevant to this standard: extractable matter, sizing.

3.3 For all other terms related to textiles, see Terminology D123.

4. Summary of Practice

4.1 Test specimens of undyed nylon or polyester fabric are cationically dyed at room temperature. The resulting depth of color of the dyed fabric is indicative of the presence and relative amount of cationically dyebable sizing in the fabric.

4.2 The color of the dyed fabric is matched to a color on an AATCC chromatic scale to determine the level of sizing in the fabric.

5. Significance and Use

5.1 The depth of color achieved in dyeing fabric according to this practice is relative to the amount of sizing in the fabric. This practice employs a chromatic staining scale from 1 to 5 which is inversely proportional to the relative amount of sizing in the fabric. A light color stain indicates a low concentration of sizing and warrants a high numerical rating, while a dark color stain indicates a high concentration of sizing and warrants a low numerical rating.

5.2 The accuracy of this practice depends upon the ability of the testing personnel to match the color of the stain to the colors in the AATCC 9 Step ChromaticTransference Scale.

6. Apparatus

6.1 *Stainless Steel or Glass Beaker* with a capacity of 1000 ml.

6.2 *Glacial Acetic Acid.*

6.3 *AATCC 9 Step Chromatic Transference Scale*[3].

6.4 *Ventilated Forced Air Drying Oven* capable of maintaining 350° ± 5°F (177 ± 3°C).

6.5 *100 % concentration of Sevron 4G or equivalent Basic Red 14 Dyestuff.*

6.6 *Fine Mesh Sieve*Fine mesh sieve with a count of per inch 100 × 100.

7. Conditioning

7.1 Neither preconditioning nor conditioning is necessary.

[1] This practice is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.20 on Inflatable Restraints.

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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.

[3] Available from AATCC P.O. Box 12215, Research Triangle Park, N.C. 27709.