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Test Method for Colorfastness to Steam Pleating

1. Purpose and Scope

1.1 This test method is intended for assessing the colorfastness of textiles of all kinds and in all forms to the action of steam pleating processes. The materials are not pleated during the test, and it is emphasized that the test is not intended for assessing the quality of the pleating process (see 12.1).

1.2 Three (3) tests, differing in severity, are provided; one (1) or more of them may be used.

1.3 The severe test is intended primarily for wholly manufactured textiles such as those made from polyamide and polyester fibers. It should not be used for textiles containing wool.

2. Principle

2.1 A specimen of the textile in contact with specified undyed cloths is steamed under specific conditions of pressure and time and then dried. The color change of the specimen and staining on the undyed cloths are assessed with standard gray scales. Color change and staining results are reported as a grade from 5 to 1, with 5 representing no color change or staining and 1 representing the most color change or staining.

3. Referenced Documents

NOTE: Use current versions of all publications unless otherwise specified.

3.1 AATCC EP1, Evaluation Procedure for Gray Scale for Color Change (see 12.2).

3.2 AATCC EP2, Evaluation Procedure for Gray Scale for Staining (see 12.2).

4. Terminology

4.1 **colorfastness**, *n.*—the resistance of a material to change in any of its color characteristics, to transfer of its colorant(s) to adjacent materials or both, as a result of the exposure of the material to any environment that might be encountered during the processing, testing, storage or use of the material.

4.2 **pleating**, *n.*—the process of making one or more desirable folds in a cloth by doubling the material over on itself.

5. Safety Precautions

NOTE: These safety statements are for information purposes only. The precautions are ancillary to the testing process.

dures and are not intended to be all inclusive. It is the user's responsibility to use safe and proper techniques in handling materials in this test method. Users MUST consult manufacturers for specific details such as safety data sheets and other recommendations. Consult and follow all applicable OSHA standards and rules.

5.1 Follow good laboratory practices. Wear safety glasses in all laboratory areas.

5.2 Follow manufacturer's safety recommendations when operating laboratory testing equipment.

6. Apparatus and Materials (see 12.3)

6.1 Specimen holder (see Fig. 1 and 12.4).

6.2 Jacketed steamer (see 12.5) or pressure cooker (see 12.6).

6.3 Two (2) undyed scoured cloths, each measuring 5×4 cm (2.0×1.6 in.), made of the same kind of fiber as that of the textile to be tested or as otherwise specified. In the case of blends, two different undyed scoured cloths are required, corresponding to the two predominant fibers (see 12.7).

6.4 Gray Scale for Color Change (see 12.2). Refer to AATCC EP1 for additional materials, environment and use of gray scale.

6.5 Gray Scale for Staining (see 12.2). Refer to AATCC EP2 for additional ma-

terials, environment and use of the gray scale.

7. Specimens

7.1 If the textile to be tested is fabric, cut a specimen 5×4 cm (2.0×1.6 in.)

7.1.1 Place fabric specimen between two (2) pieces of undyed cloth and sew along one side to form a composite specimen.

7.2 If the textile to be tested is yarn, knit it into fabric and treat it as in 7.1, or form a layer of parallel lengths of yarn between the two (2) pieces of undyed cloth, the amount of yarn taken being approximately equal to half the combined mass of the undyed cloths. Sew along one side to hold the yarn in place and to form a composite specimen.

7.3 If the textile to be tested is loose fiber, comb and compress an amount approximately equal to half the combined mass of the undyed cloths into a sheet 5×4 cm (2.0×1.6 in.). Place the sheet between the two (2) undyed cloths, and sew along all sides to form a composite specimen.

8. Procedure

8.1 Mount the composite specimen in the holder between the two undyed cloths (see 6.3) as shown in Fig. 1.

8.2 Place the holder containing the composite specimen in a jacketed

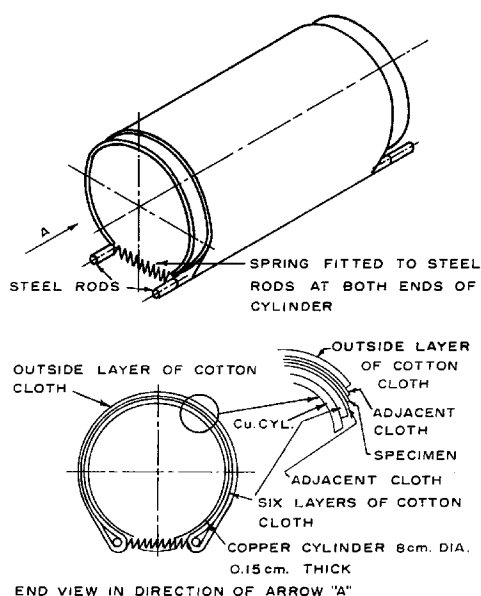


Fig. 1—Specimen holder.