



Standard Test Method for Colorfastness of Crocking of Leather¹

This standard is issued under the fixed designation D 5053; 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 determination of the degree of color that may be transferred from leather to other surfaces by rubbing under wet (damp) or dry conditions, or both. This test method does not apply to wet blue.

1.2 The values stated in inch-pound 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 1517 Terminology Relating to Leather²

D 1610 Practice for Conditioning Leather and Leather Products for Testing²

D 2813 Practice for Sampling Leather for Physical and Chemical Tests²

2.2 AATCC Methods:

AATCC Method 8 Colorfastness to Crocking:

AATCC Crockmeter Method³

AATCC Chromatic Transference Scale or Gray Scale for Staining³

3. Terminology

3.1 **Definitions**—For definitions of colorfastness and crocking, refer to AATCC Method 8. For other specific leather terminology, see Terminology D 1517.

4. Summary of Test Method

4.1 A specimen of the leather sample fastened to the base of a crockmeter is rubbed with white crock test cloth under controlled conditions. Color transferred to the white cloth is assessed by a comparison with the AATCC chromatic transference scale; an alternative is to use the gray scale for staining as suggested in AATCC Method 8.

¹ This test method is under the jurisdiction of ASTM Committee D31 on Leather and is the direct responsibility of Subcommittee D31.04 on Apparel and Upholstery. Current edition approved Sept. 10, 2000. Published October 2000. Originally published as D 5053 – 90. Last previous edition D 5053 – 95.

² *Annual Book of ASTM Standards*, Vol 15.04.

³ Technical Manual of the American Association of Textile Chemist and Colorist, P.O. Box 12215, Research Triangle Park, NC 27709-2215.

5. Significance and Use

5.1 This test method is intended for use on any type of leather.

6. Apparatus

6.1 *Apparatus*, as specified in AATCC Test Method 8.^{4,5}

6.2 *Test Cloth*, white crock.^{5,6}

6.3 *Test Cloth*, blue crock.^{5,7}

7. Sampling, Test Specimens, and Test Units

7.1 The minimum size of the test specimen shall be 2 by 5 in. (5.1 by 12.7 cm). However, where nondestructive testing of skins is desired, the entire skin may be used and tested in any portion of its area. (See Practice D 2813 for proper sampling area.)

7.2 All specimens shall be conditioned as prescribed in Practice D 1610. Conditioning other than as prescribed shall be noted in the results.

8. Procedure

8.1 **Dry Test**—Mount the test specimen flat on the base of the testing machine with its long dimensions in the direction of the motion of the finger. Use white cloth for testing colored leathers, and use blue cloth for white or light-colored leathers. Condition the piece of cloth, 2 in.², for at least 2 h in the standard atmosphere. Then place on the end of the finger with the weave of the cloth oblique to the direction of rubbing. Place the finger with the cloth cover on the specimen and operate the machine for ten complete turns of the crank at a rate of one turn per second. When a comparison is required, test a standard specimen in the same manner.

8.2 **Wet Test**—Place a new area of the test specimen and a new piece of cloth on the testing machine as described in 8.1. Before placing the cloth on the finger, wet it with distilled

⁴ The sole source of supply of the AATCC crockmeter known to the committee at this time is Atlas Electric Devices Company, 4114 North Ravenswood Avenue, Chicago, IL 60613. Telephone: (312) 327-4520.

⁵ If you are aware of alternative suppliers, please provide this information to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee,¹ which you may attend.

⁶ The sole source of supply of test cloth known to the committee at this time is Testfabrics Inc., 200 Blackford Ave., Middlesex, NJ 08846. Telephone: (908) 469-6446. Fax: (908) 469-1147.

⁷ The sole source of supply of test cloth known to the committee at this time is Wolverine Leathers, Tannery Laboratory, 123 N. Main St., Rockford, MI 49351. Telephone: (616) 866-6206. Fax: (616) 866-0992. Test cloth shall be ordered by specified inches from a 48 in. wide bolt of material.