



Designation: D5053 – 03 (Reapproved 2023)

Standard Test Method for Colorfastness of Crocking of Leather¹

This standard is issued under the fixed designation D5053; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

[D1517 Terminology Relating to Leather](#)

[D1610 Practice for Conditioning Leather and Leather Products for Testing](#)

[D2813 Practice for Sampling Leather for Physical and Chemical Tests](#)

2.2 *AATCC Methods:*

[AATCC Method 8 Colorfastness to Crocking:](#)

[AATCC Crockmeter Method](#)³

[AATCC Chromatic Transference Scale or Gray Scale for Staining](#)³

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.

Current edition approved May 1, 2023. Published May 2023. Originally approved in 1995. Last previous edition approved in 2015 as D5053 – 03 (2015). DOI: 10.1520/D5053-03R23.

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

3. Terminology

3.1 *Definitions*—For definitions of colorfastness and crocking, refer to AATCC Method 8. For other specific leather terminology, see Terminology [D1517](#).

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.

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*, black crock.^{5,7}

7. Sampling, Test Specimens, and Test Units

7.1 The minimum size of the test specimen shall be 2 in. by 5 in. (5.1 cm 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 [D2813](#) for proper sampling area.)

7.2 All specimens shall be conditioned as prescribed in Practice [D1610](#). Conditioning other than as prescribed shall be noted in the results.

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 source of this test cloth is Textile Innovators Corp., 101 Forest St., Windsor, NC 27983, Tel No. 252-794-9703, Fax No. 252-794-9704. Order as TIC 400 Cotton print cloth, Direct Black 22.