



Designation: D5552 – 10 (Reapproved 2023)

## Standard Test Method for Resistance of Colored Leather to Bleeding<sup>1</sup>

This standard is issued under the fixed designation D5552; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This test method covers the determination of the resistance of colored leather to bleeding. This test method does not apply to wet blue.

1.2 This test method is intended for use on finished upper leather for shoes or similar end use, or the leather article such as shoe, handbag, etc.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 *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.*

1.5 *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 *ALCA Method:*

**K 12 Method for Testing Resistance of Colored Leather to Bleeding<sup>2</sup>**

### 3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *bleeding, n*—the transfer of color from a finished leather sample onto or into another medium.

### 4. Significance and Use

4.1 Bleed resistance is considered to be an important characteristic in leather used to make lined and unlined items that may come in contact with water.

<sup>1</sup> 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 1994. Last previous edition approved in 2015 as D5552–10 (2015). DOI: 10.1520/D5552-10R23.

<sup>2</sup> Developed by and available from the American Leather Chemists Association (ALCA), University of Cincinnati—M.L. 14, Cincinnati, OH 45221-0014.

### 5. Apparatus

5.1 *Air-Tight Oven.*

5.2 *Bleached Cotton Sheetting,<sup>3</sup> 2 in. squares (51.6 mm by 51.6 mm).*

5.3 *Glass Plates, two 6 in. squares (152.4 mm by 152.4 mm) and 0.125 in. (3.18 mm) thick.*

### 6. Test Specimen

6.1 The test specimen shall be a 4 in. square (101.6 mm by 101.6 mm) of finished leather.

### 7. Procedure

7.1 Place the unfinished side of the leather specimen on the center of one of the glass plates. Thoroughly soak the four squares of cotton sheeting in distilled water for 5 min. Stack them on top of each other on the other glass plate. Invert this plate with the cotton cloths, and place on top of the other plate holding the leather specimen. The cloths should line up approximately in the center of the leather specimen.

7.2 The cloth in immediate contact with the leather is marked Number 1, the next cloth Number 2, the next Number 3 and the top cloth Number 4. Place this entire sandwich in an oven at 120 °F (49 °C) for 12 h to 16 h. Remove the glass plates and observe the individual cloths for discoloration.

### 8. Report

8.1 *Migration of Bleeding*—Observe each of the four cloths for coloration and report migration as 0, 1, 2, 3, or 4. The numbers indicate the cotton cloth that discoloration has reached by migration.

8.2 *Hue*—Note the predominant hue of the colors that bled on each cloth.

8.3 *Intensity*—Observe each cloth Number 1 for this purpose. The degrees of intensity shall be termed none, slight, moderate, or considerable as determined by comparing the test

<sup>3</sup> The sole source of supply of the sheeting known to the committee at this time is Testfabrics Inc., 200 Blackford Avenue, P.O. Box 420, Middlesex, NJ 08846-0420. 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,<sup>1</sup> which you may attend.

cloth discoloration to the AATCC Grey Scale for Evaluating Staining.<sup>4</sup> Intensity shall be reported using AATCC Grey Scale numbering.

8.4 Report the exact number of hours of contact of leather to cloth.

## 9. Precision and Bias

9.1 This test method is adopted from Method K 12 of the American Leather Chemists Association where it has long been

---

<sup>4</sup> Available from American Association of Textile Chemists and Colorists (AATCC), P.O. Box 12215, Research Triangle Park, NC 27709, <http://www.aatcc.org>.

in use and was approved for publication before the inclusion of precision and bias statements was mandated. The original interlaboratory test data are no longer available. The user is cautioned to verify by the use of reference materials, if available, that the precision and bias (or reproducibility) of this test method is adequate for the contemplated use.

## 10. Keywords

10.1 bleed resistance; bleeding; migration

*ASTM International takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.*

*This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.*

*This standard is copyrighted by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or [service@astm.org](mailto:service@astm.org) (e-mail); or through the ASTM website ([www.astm.org](http://www.astm.org)). Permission rights to photocopy the standard may also be secured from the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, Tel: (978) 646-2600; <http://www.copyright.com/>*

(<https://standards.iteh.ai>)  
Document Preview

[ASTM D5552-10\(2023\)](https://standards.iteh.ai/catalog/standards/sist/334e8449-3bf0-4aa2-acf0-85ee10ed430e/astm-d5552-102023)

<https://standards.iteh.ai/catalog/standards/sist/334e8449-3bf0-4aa2-acf0-85ee10ed430e/astm-d5552-102023>