



Designation: D2054 – 99 (Reapproved 2022)

Standard Test Method for Colorfastness of Zipper Tapes to Crocking¹

This standard is issued under the fixed designation D2054; 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 the textile tape of zippers of all fibers to other surfaces by rubbing under wet or dry conditions, or both.

1.2 The values stated in SI units are to be regarded as standard. The values given in parentheses after SI units are provided for information only and are not considered standard.

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

[D123 Terminology Relating to Textiles](#)

[D1776 Practice for Conditioning and Testing Textiles](#)

[D2050 Terminology Relating to Subassemblies Used in the Manufacture of Textiles](#)

2.2 *AATCC Methods:*³

[Method 8 Colorfastness to Crocking:](#)

[AATCC Crockmeter Method](#)

[AATCC Chromatic Transference Scale](#)

¹ This test method is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.54 on Subassemblies. This test method was developed in cooperation with the Slide Fastener Association, Inc.

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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 Technical Manual of the American Association of Textile Chemists and Colorists, P. O. Box 12215, Research Triangle Park, NC 27709.

3. Terminology

3.1 *Definitions*—For definitions of zipper terms used in this standard, refer to Terminology [D2050](#). For definitions of other textile terminology used in this standard, refer to Terminology [D123](#).

4. Summary of Test Method

4.1 A specimen of the zipper tape fastened to the base of a crockmeter is rubbed with white crock test cloth under controlled conditions. Color transferred to the white test cloth is assessed by a comparison with the AATCC Chromatic Transference Scale.

5. Significance and Use

5.1 This test method is considered satisfactory for acceptance testing of commercial shipments because the method has been used extensively in the trade for acceptance testing.

5.1.1 If there are differences of practical significance between reported test results for two laboratories (or more), comparative tests should be performed to determine if there is a statistical bias between them, using competent statistical assistance. As a minimum, the test samples should be used that are as homogeneous as possible, that are drawn from the material from which the disparate test results were obtained, and that are randomly assigned in equal numbers to each laboratory for testing. Other materials with established test values may be used for this purpose. The test results from the two laboratories should be compared using a statistical test for unpaired data, at a probability level chosen prior to the testing series. If a bias is found, either its cause must be found and corrected, or future test results must be adjusted in consideration of the known bias.

6. Apparatus

6.1 *Apparatus*, as specified in AATCC Test Method 8.

6.2 *Smooth Cardboard Cards*, 50 mm by 200 mm (2 in. by 8 in.) approximating index card weight.

7. Sampling and Test Specimens

7.1 *Primary Sampling Unit*—Consider individual containers from each shipping carton to be the primary sampling units

7.2 *Laboratory Sampling Unit*—As a laboratory sampling unit, take at random one zipper from each primary sampling unit.

7.3 *Test Specimens*—Consider the laboratory sample as the test specimen.

8. Mounting the Test Specimen

8.1 Bring the specimens to moisture equilibrium for testing in the standard atmosphere for testing textiles as directed in Practice **D1776**. Preconditioning is not required.

9. Procedure

9.1 Center the specimen on the base of the crockmeter so that it rests flatly on the abrasive cloth with its long dimension in the direction of rubbing. Secure the specimen card and test for colorfastness to crocking as directed in Section 5.1.2 and subsequent sections of AATCC Test Method 8.

10. Interpretation of Results

10.1 Interpret the results of the test on the specimens as directed in AATCC Test Method 8 and Evaluation Procedure 3.

11. Report

11.1 State that the specimens were tested as directed in Test Method D2054. Describe the material or product sampled, and the method of sampling used.

11.2 Report the following information for the laboratory sampling unit and for the lot as applicable to a material specification or contract order:

11.2.1 Number of specimens tested,

11.2.2 Whether wet or dry crocking test was utilized, and

11.2.3 Degree of staining for each specimen as the appropriate grade on the AATCC Chromatic Transference Scale.

12. Precision and Bias

12.1 *Precision*—The precision of this test method is being established.

12.2 *Bias*—The procedure of this test method produces a test value that can be defined only in terms of a test method. There is no independent, referee method by which bias may be determined. This test method has no known bias.

13. Keywords

13.1 colorfastness; zipper

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