



# Standard Test Method for Colorfastness of Zippers to Light<sup>1</sup>

This standard is issued under the fixed designation D2053; 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 alteration in shade of the textile portion of zippers when exposed to light, regardless of the materials of manufacture.

1.2 The values stated in either SI units or inch-pound units are to be regarded separately as the standard. Within the text, the inch-pound units are shown in parentheses. The values stated in each system are not exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in nonconformance with this test method.

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:<sup>2</sup>

- D123 Terminology Relating to Textiles
- D2050 Terminology Relating to Fasteners and Closures Used with Textiles
- D2051 Test Method for Durability of Finish of Zippers to Laundering
- D2052 Test Method for Colorfastness of Zippers to Dry-cleaning
- D2054 Test Method for Colorfastness of Zipper Tapes to Crocking
- D2057 Test Method for Colorfastness of Zippers to Laundering
- D2058 Test Method for Durability of Finish of Zippers to Drycleaning
- D2059 Test Method for Resistance of Zippers to Salt Spray (Fog)

<sup>1</sup> 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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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

D2060 Test Methods for Measuring Zipper Dimensions

D2061 Test Methods for Strength Tests for Zippers

D2062 Test Methods for Operability of Zippers

### 2.2 AATCC Methods:

Test Method 16 Colorfastness to Light<sup>3</sup>

AATCC Gray Scale for Color Change<sup>3</sup>

Evaluation Procedure 1 Gray Scale for Color Change<sup>3</sup>

## 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 zipper tape and chain is exposed to continuous artificial light for a predetermined period of exposure. Fading of the specimen is evaluated and rated by means of the AATCC Gray Scale for Color Change.

## 5. Significance and Use

5.1 This test method is useful in determining if the loss of color due to light exposure is satisfactory for the intended end-use.

5.2 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.

5.2.1 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

<sup>3</sup> Technical Manual of the American Association of Textile Chemists and Colorists, P. O. Box 12215, Research Triangle Park, NC 27709.