



Designation: D2061 – 07 (Reapproved 2021)

# Standard Test Methods for Strength Tests for Zippers<sup>1</sup>

This standard is issued under the fixed designation D2061; 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 These test methods cover the determination of the strengths for zipper and zipper parts. All methods are not suitable for use with all kinds of zipper. The restrictions, if any, are indicated in the scope for each individual test method. The test methods appear as follows:

|                                                               | Sections |
|---------------------------------------------------------------|----------|
| Holding Strengths of Separable Units                          | 25 – 32  |
| Holding Strength of Slider Lock                               | 92 – 100 |
| Holding Strength of Stops                                     | 17 – 24  |
| Resistance to Angular Pull-Off of Slider Pull                 | 82 – 91  |
| Resistance to Cushioned Compression of Sliders                | 33 – 42  |
| Resistance to Pull-Off of Slider Pull                         | 72 – 81  |
| Resistance to Twist of Pull and Slider                        | 52 – 61  |
| Slider Deflection and Recovery                                | 43 – 51  |
| Strength of Chains and Elements                               | 9 – 16   |
| Torsional Resistance of Slider Pull for Removal of Components | 62 – 71  |

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:<sup>2</sup>

<sup>1</sup> These test methods are under the jurisdiction of ASTM Committee D13 on Textiles are the direct responsibility of Subcommittee D13.54 on Subassemblies and were developed in cooperation with the American Fastener and Closure Assn.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM web site, [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 web site.

D76/D76M Specification for Tensile Testing Machines for Textiles

D123 Terminology Relating to Textiles

D1776/D1776M Practice for Conditioning and Testing Textiles

D2050 Terminology Relating to Subassemblies Used in the Manufacture of Textiles

D2051 Test Method for Durability of Finish of Zippers to Laundering

D2052 Test Method for Colorfastness of Zippers to Drycleaning

D2053 Test Method for Colorfastness of Zippers to Light

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/D2059M Test Method for Resistance of Zippers to Salt Spray (Fog)

D2060 Test Methods for Measuring Zipper Dimensions

D2062 Test Methods for Operability of Zippers

2.2 U. S. Government Standard:

MIL-105D Sampling Procedures and Tables for Inspection by Attributes<sup>3</sup>

## 3. Terminology

### 3.1 Definitions:

3.1.1 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. Significance and Use

4.1 The usefulness of a zipper in service can be evaluated by these tests. No one test determines the suitability of a zipper for a specific end use. Since the tests are inter-related more than one may be needed for a complete evaluation.

4.2 These methods are considered satisfactory for acceptance testing of commercial shipments because the methods have been used extensively in the trade for this purpose, and

<sup>3</sup> Available from DLA Document Services, Building 4/D, 700 Robbins Ave., Philadelphia, PA 19111-5094, <http://quicksearch.dla.mil>.