



Designation: D 2061 – 93 (Reapproved 1998)

Standard Test Methods for Strength Tests for Zippers¹

This standard is issued under the fixed designation D 2061; 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	82-90
Holding Strength of Stops	17-24
Resistance to Angular Pull-Off of Slider Pull	72-81
Resistance to Cushioned Compression of Sliders	33-42
Resistance to Pull-Off of Slider Pull	62-71
Resistance to Twist of Pull and Slider	52-61
Slider Deflection and Recovery	43-51
Strength of Chains and Elements	9-16

1.2 The values stated in SI units are to be regarded as the 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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- D 76 Specification for Tensile Testing Machines for Textiles²
- D 123 Terminology Relating to Textiles²
- D 1776 Practice for Conditioning Textiles for Testing²
- D 2050 Terminology Relating to Zippers²
- D 2051 Test Method for Durability of Finish of Zippers to Laundering²
- D 2052 Test Method for Colorfastness of Zippers to Drycleaning²
- D 2053 Test Method for Colorfastness of Zippers to Light²
- D 2054 Test Method for Colorfastness of Zipper Tapes to Crocking²
- D 2057 Test Method for Colorfastness of Zippers to Laundering²

¹ These test methods are under the jurisdiction of ASTM Committee D-13 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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² Annual Book of ASTM Standards, Vol 07.01.

D 2058 Test Method for Durability of Finish of Zippers to Drycleaning²

D 2059 Test Method for Resistance of Zippers to Salt Spray (Fog)²

D 2060 Test Methods for Measuring Zipper Dimensions²

D 2062 Test Methods for Operability of Zippers²

2.2 U. S. Government Standard:

MIL-105D Sampling Procedures and Tables for Inspection by Attributes³

3. Terminology

3.1 Definitions:

3.1.1 For definitions of terms relating to zippers used in these test methods, refer to Terminology D 2050. For definitions of other textile terms refer to Terminology D 123.

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 because estimates of current between-laboratory precision are acceptable in most cases.

4.2.1 In case of a dispute arising from differences in reported test results when using Test Methods D 2061 for acceptance testing of commercial shipments, the purchaser and the supplier should conduct comparative tests to determine if there is a statistical bias between their laboratories. Competent statistical assistance is recommended for the investigation of bias. As a minimum, the two parties should take a group of test specimens that are as homogeneous as possible and that are from a lot of material of the type in question. The test specimens should then be randomly assigned in equal numbers to each laboratory for testing. The average results from the two laboratories should be compared using Student's *t*-test for unpaired data and an acceptable probability level chosen by the two parties before the testing is begun. If a bias is found, either its cause must be found and corrected or the purchaser and the supplier must agree to interpret future test results in the light of the known bias.

³ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.