



Designation: D3657 – 03

Standard Specification for Zipper Dimensions¹

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1. Scope

1.1 This specification establishes standard dimensions for zippers of all materials for specified size designation; for equivalency, in inch-pound and metric units, of zipper length and length tolerances, of tape width and width tolerances, and of tape end lengths.

1.2 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the systems may result in non-conformance with 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:*²

D123 Terminology Relating to Textiles

D2050 Terminology Relating to Subassemblies

D2060 Test Methods for Measuring Zipper Dimensions

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. Sampling

4.1 Sample the lot and select the number of specimens as directed in Methods D2060.

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

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² For reference ASTM standards, visit the ASTM Web Site, 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 web site.1.

TABLE 1 Zipper Sizes

| Size Designation ^A | Slider Mouth Widths | |
|-------------------------------|---------------------|---------------------|
| | mm | in. |
| 1 and 2 | up to 3.8 | up to 0.150 |
| 3 and 4 | over 3.8 to 5.7 | over 0.150 to 0.225 |
| 5 and 6 | over 5.7 to 7.0 | over 0.225 to 0.275 |
| 7, 8, 9, and 10 | over 7.0 | over 0.275 |

^A Zipper sizes are grouped in this table because the trade buys zippers on an end-use basis. For example, size 1 and 2 zippers are bought and used interchangeably. Each zipper industry member assigns the actual number that is applicable for each particular product.

5. Dimensions and Permissible Variations

5.1 Zippers shall conform to the dimensions listed in Tables 1-4.

5.2 Tables 2 and 3 include tolerances which represent trade practice and are in common use. The tolerances are not uniform between sizes because of differing requirements of the zippers based on their normal end-use.

5.3 Table 2, within a size, has uniform plus tolerances. Minus tolerances increase nonuniformly with increasing length because that is accepted trade practice based on the requirements of the end products in which the zippers are installed.

5.3.1 Because zipper chain is composed of a series of elements with a prescribed pitch and each element must remain complete to function, it is impossible to manufacture a zipper deliberately to an exact stated length. Therefore a shipment of zippers of a stated length will not likely average the stated length. Both the lot average length and the length of individual zippers should fall within the tolerances in Table 2.

5.4 Table 4 shows the metric conversion for standard inch-pound unit tape end lengths. Tape end length tolerances are not shown due to widely varying end-use requirements and inherent zipper manufacturing dimension variations. Tolerances to be observed should be agreed upon between purchaser and supplier.

6. Test Methods

6.1 *Size*—Determine the zipper size as directed in the mouth width procedure of Test Methods D2060.

6.2 *Zipper Length*—Determine the zipper length as directed in the length of completely assembled zipper procedure of Test Methods D2060.

6.3 *Tape Width*—Determine the zipper tape width as directed in the tape width procedure of Test Methods D2060.