



Standard Test Method for Resistance of Zippers to Salt Spray (Fog)¹

This standard is issued under the fixed designation D 2059; 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 resistance of all types of zippers to corrosion and their ability to function properly after exposure of specified duration in a prescribed salt spray.

1.2 The values stated in SI units are to be regarded as the standard. The values in parentheses are for information only.

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

- B 117 Practice for Operating Salt Spray (Fog) Testing Apparatus
- D 123 Terminology Relating to Textiles
- D 2050 Terminology Relating to Zippers
- D 2051 Test Method for Durability of Finish of Zippers to Laundering
- D 2052 Test Method for Colorfastness of Zippers to Drycleaning
- D 2053 Test Method for Colorfastness of Zippers to Light
- D 2054 Test Method for Colorfastness of Zipper Tapes to Crocking
- D 2057 Test Method for Colorfastness of Zippers to Laundering
- D 2058 Test Method for Durability of Finish of Zippers to Drycleaning
- D 2060 Test Methods for Measuring Zipper Dimensions
- D 2061 Test Methods for Strength Tests of Zippers
- D 2062 Test Methods for Operability of Zippers

2.2 U. S. Government Standard:

MIL 105D Sampling Procedures and Tables for Inspecting Attributes³

3. Terminology

3.1 Definitions:

3.1.1 For definitions of zipper terms used in this standard refer to Terminology D 2050. For definitions of other, textile terminology used in this standard refer to Terminology D 123.

4. Summary of Test Method

4.1 The effects of corrosion on zippers, should it occur, are evaluated visually and by measuring the crosswise strength and the force required to open and close the zipper both before and after exposure in a prescribed salt-spray atmosphere for a specified time.

5. Significance and Use

5.1 The resistance of a zipper to a variety of saline and non-saline environments can be estimated from the amount and nature of corrosion products and their effect on operability. Results of exposure to the salt spray are merely indicative of the reaction to other corrosive conditions. While the results cannot be related precisely to a given length of exposure in a specific atmosphere, they are useful for measuring relative performance under prescribed conditions for controlling a manufacturing process, and for measuring the effectiveness of protective coatings.

5.2 Test Method D 2059 for the determination of the resistance of zippers to salt spray is considered satisfactory for acceptance testing of commercial shipments of zippers because the test method is 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 test 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

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. The method was developed in cooperation with the Slide Fastener Assn., Inc.

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² For referenced 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.

³ Available from Naval Publications and Forms Center, 5801 Tabor Ave., Philadelphia, PA 19120.