Designation: D2059/D2059M – 03(Reapproved 2009)

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

This standard is issued under the fixed designation D2059/D2059M; 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 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 two 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]

B117 Practice for Operating Salt Spray (Fog) Apparatus
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 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
D2060 Test Methods for Measuring Zipper Dimensions
D2061 Test Methods for Strength Tests for Zippers
D2062 Test Methods for Operability of Zippers

2.2 *U. S. Government Standard:*

MIL-STD-105D Sampling Procedures and Tables for Inspecting Attributes[3]

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. 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 D2059 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

[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.