



Standard Specification for Greige Woven Glass Fabrics¹

This standard is issued under the fixed designation D 579; 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 specification covers greige fabrics woven from “E” electrical glass fiber yarns. This specification can also be applied to fabrics made of other glass fiber types as agreed upon between the purchaser and the supplier.

1.2 This specification specifies the terminology, definitions, general requirements and physical requirements for greige glass fiber fabrics. This specification permits the application of organic materials to the glass fiber yarn during manufacture that helps facilitate weaving.

1.3 This specification shows the values in both SI units and in inch-pound units. “SI units” is the technically correct name for the system of metric units known as the International System of Units. “Inch-pound units” is the technically correct name for the customary units used in the United States. The values in SI units are provided as information only; the values stated in inch-pound units are to be regarded as standard.

1.4 This specification is one of a series to provide a substitute for Military Specifications: MIL-Y-1140 Yarn, Cord, Sleeve, Cloth, and Tape-Glass; and MIL-C-9084 Cloth, Glass Finished for Resin Laminates.

1.5 Additional ASTM specifications in this series have been drafted and appear in current editions of the Annual Book of ASTM Standards. These include finished glass fabrics, unfinished glass fabrics, glass tapes, glass sleeveings, glass cords, glass sewing threads, and finished laminates made from finished glass fabrics.

1.6 *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 Documents²

2.1 ASTM Standards:

D 123 Terminology Relating to Textiles

¹ This specification is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.18 on Glass Fiber and Its Products.

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² For referenced ASTM standards, visit the ASTM website, 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 website.

D 578 Specification for Glass Fiber Strands

D 1059 Test Method for Yarn Number Based on Short-Length Specimens

D 1423 Test Method for Twist in Yarns by the Direct-Counting Method

D 1776 Practice for Conditioning Textiles for Testing

D 1777 Method for Measuring Thickness of Textile Materials

D 3773 Test Methods for Length of Woven Fabric

D 3774 Test Methods for Width of Textile Fabric

D 3775 Test Method for Warp End Count and Filling Pick Count of Woven Fabric

D 3776 Test Methods for Mass Per Unit Area (Weight) of Fabric

D 4029 Specification for Finished Woven Glass Fabrics

D 4963 Test Method for Ignition Loss of Glass Strands and Fabrics

D 5035 Test Method for Breaking Force and Elongation of Textile Fabrics (Strip Method)

2.2 ANSI Standards:

ANSI/ASQC Z1.4 Sampling Procedures for Inspection by Attributes³

2.3 Military Standard and Specifications:

MIL-Y-1140H Yarn, Cord, Sleeve, Cloth and Tape-Glass⁴

MIL-C-9084C Cloth, Glass Finished for Resin Laminates⁴

2.4 Textile Institute Documents:

Textile Terms and Definitions⁵

Woven Cloth Construction⁵

2.4 Institute for Interconnecting and Packaging Circuits Standard:

IPC-4412 Specification for Finished Fabric Woven from E Glass for Printed Boards⁶

3. Terminology

3.1 Definitions:

3.1.1 *atmosphere for testing textiles, n—for glass*, air maintained at a relative humidity of at least 48 % and no greater

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

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

⁵ Available from the Textile Institute, 10 Blackfriars St., Manchester, M3 5DR England.

⁶ Available from the Institute for Interconnecting and Packaging Electronic Circuits, 7380 N. Lincoln Ave., Lincolnwood, IL 60646.