



Standard Specification for Finished Woven Glass Fabrics¹

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1. Scope

1.1 This specification covers finished fabrics woven from “E” electrical glass fiber yarns that are intended as a reinforcing material in laminated plastics for structural use. This specification can also be applied to fabrics made of other glass types as agreed upon between the purchaser and the supplier.

1.2 This specification specifies the terminology, definitions, general requirements, and physical requirements for finished woven glass fabrics. This specification permits the application of sizing materials to the glass fiber yarn during manufacture that helps facilitate weaving. These organic materials are typically removed from the greige fabric and replaced with a finish that is compatible with the resin matrix specified in the contracting document.

NOTE 1—Sizing materials on glass fiber yarns, in most cases, are removed by various cleaning procedures as a first stage in preparing a finished fabric. When these yarn sizing materials are removed during a cleaning procedure they need not be compatible with the subsequent resin matrix.

1.3 This specification shows 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 greige 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 appro-*

priate safety and health practices and determine the applicability of regulatory limitations prior to use.

2. Referenced Documents

2.1 ASTM Standards:²

- D 123 Terminology Relating to Textiles
- D 578 Specification for Glass Fiber Strands
- D 579 Specification for Greige Woven Glass Fabrics
- 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 Test Method for Thickness of Textile Materials
- D 2150 Specification for Woven Glass Fabric for Polyester Glass Laminates
- D 2408 Test Method for Finish Content of Woven Glass Fabric, Cleaned and After-Finished with Amino-Silane Type Finishes, for Plastic Laminates
- D 2409 Test Method for Finish Content of Woven Glass Fabric, Cleaned and After-Finished with Vinyl-Silane Type Finishes, for Plastic Laminates
- D 2410 Test Method for Finish Content of Woven Glass Fabric, Cleaned and After-Finished with Chrome Complexes, for Plastic Laminates
- D 2660 Test Method for Finish Content of Woven Glass Fabric, Cleaned and After-Finished with Acrylic-Silane Type Finishes, for Plastic Laminates
- D 3098 Test Method for Finish Content of Woven Glass Fabric, Cleaned and After-Finished with Epoxy—Functional Silane-Type Finishes for Plastic Laminates
- D 3773 Test Methods for Length of Woven Fabric
- D 3774 Test Methods for Width of Woven 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 4963 Test Method for Ignition Loss of Glass Strands and Fabrics

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.

