



Designation: D 4029 – 97

Standard Specification for Finished Woven Glass Fabrics¹

This standard is issued under the fixed designation D 4029; 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 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 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 woven glass fiber finished fabrics. This specification permits the application of sizing materials to the glass fiber yarn during manufacture that helps facilitate weaving. When used as permitted in this specification, such materials are compatible with the resin matrix as specified in the contracting instrument.

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 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.*

NOTE 2—This specification is one of a series to provide a substitute for Military Specifications:

MIL-Y-1140H

MIL-C-9084C

NOTE 3—Specification D 2150, for Woven Glass Fabric for Polyester Glass Laminates,² is being extensively revised. This method will contain

test methods and requirements for laminated plastics made from fabrics referenced in this specification.

2. Referenced Documents

2.1 ASTM Standards:

D 123 Terminology Relating to Textiles³

D 578 Specification for Glass Fiber Strands³

D 579 Specification for Greige Woven Glass Fabrics³

D 1059 Test Method for Yarn Number Based on Short-Length Specimens³

D 1423 Test Method for Twist in Yarns by the Direct-Counting Method³

D 1776 Practice for Conditioning Textiles for Testing³

D 1777 Test Method for Measuring Thickness of Textile Materials³

D 2150 Specification for Woven Glass Fabric for Polyester Glass Laminates²

D 2408 Test Method for Finish Content of Woven Glass Fabric, Cleaned and After-Finished with Amino-Silane Type Finishes, for Plastic Laminates²

D 2409 Test Method for Finish Content of Woven Glass Fabric, Cleaned and After-Finished with Vinyl-Silane Type Finishes, for Plastic Laminates²

D 2410 Test Method for Finish Content of Woven Glass Fabric, Cleaned and After-Finished with Chrome Complexes, for Plastic Laminates²

D 2660 Test Method for Finish Content of Woven Glass Fabric, Cleaned and After-Finished with Acrylic-Silane Type Finishes, for Plastic Laminates²

D 3098 Test Method for Finish Content of Woven Glass Fabric, Cleaned and After-Finished with Epoxy—Functional Silane-Type Finishes for Plastic Laminates²

D 3773 Test Methods for Length of Woven Fabric⁴

D 3774 Test Methods for Width of Woven Fabric⁴

D 3775 Test Method for Fabric Count of Woven Fabric⁴

D 3776 Test Methods for Mass per Unit Area (Weight) of Woven Fabric⁴

D 4357 Specification for Plastic Laminates Made from Woven-Roving and Woven-Yarn Glass Fabrics⁵

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 Annual Book of ASTM Standards, Vol 08.02.

³ Annual Book of ASTM Standards, Vol 07.01.

⁴ Annual Book of ASTM Standards, Vol. 07.02.

⁵ Annual Book of ASTM Standards, Vol 08.03.