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## Standard Specification for WOVEN ROVING GLASS FABRIC FOR POLYESTER- GLASS LAMINATES<sup>1</sup>

This standard is issued under the fixed designation D 2150; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This specification covers woven fabrics made from glass rovings that are intended for use in laminated plastics for structural or semi-structural parts.

### 2. Applicable Documents

#### 2.1 ASTM Standards:

- D 618 Conditioning Plastics and Electrical Insulating Materials for Testing<sup>2</sup>
- D 790 Tests for Flexural Properties of Plastics and Electrical Insulating Materials<sup>3</sup>
- D 1898 Recommended Practice for Sampling of Plastics<sup>3</sup>
- D 1910 Test for Construction Characteristics of Woven Fabrics<sup>4</sup>
- D 2584 Test for Ignition Loss of Cured Reinforced Resins<sup>5</sup>

#### 2.2 Military Standard:

- MIL-STD-105 Sampling Procedures and Tables for Inspection by Attributes<sup>6</sup>

### 3. Types

3.1 This specification covers the 16 types of fabrics described in Table 1.

### 4. General Requirements

4.1 *Strand Composition*—The roving strand will be designated by the yield in metres per kilogram (yards per pound).

4.2 *Binder*—The glass rovings used to make the fabrics shall contain a sizing to facilitate weaving and to impart high wet strength to laminates. Unless otherwise specified, the sizing shall be compatible with a polyester laminating resin selected by the supplier of the woven roving. When specified, the sizing shall be com-

patible with a particular polyester (or other type) resin specified in the purchase order. When so specified, the test laminate (see Section 8) shall be made with that resin and the purchase order shall specify its dry and wet flexural strength requirements.

4.3 *Weights and Dimensions*—The woven roving glass fabric shall conform to the requirements for roll length, weights, and dimensions described in Table 2.

4.4 *Widths*—The following widths shall be considered standard: 965 mm (38 in.), 1120 mm (44 in.), 1270 mm (50 in.), and 1520 mm (60 in.). Other widths are available upon request. The widths of the fabric shall vary not more than  $\pm 12.7$  mm ( $\pm 0.50$  in.).

4.5 *Workmanship*—The fabric shall be manufactured in accordance with best commercial practice to produce a material of uniform quality, substantially free from defects that would affect its end use application.

### 5. Detail Requirements

5.1 The properties of the fabric shall be such that when plastic laminates are fabricated and tested as specified in Sections 7 to 10, the

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<sup>2</sup> Annual Book of ASTM Standards, Parts 22, 35, and 39.

<sup>3</sup> Annual Book of ASTM Standards, Part 35.

<sup>4</sup> Annual Book of ASTM Standards, Part 32.

<sup>5</sup> Annual Book of ASTM Standards, Part 36.

<sup>6</sup> Available from Naval Publications and Forms Center, 5801 Tabor Ave., Philadelphia, Pa. 19120.