



Standard Specification for Solar Screening Woven from Vinyl-Coated Fiber Glass Yarn¹

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1. Scope

1.1 This specification covers the requirements for vinyl-coated fiber glass solar screening, and should help users recognize the characteristics of acceptable vinyl-coated fiber glass solar screening. This specification is limited in application to vinyl-coated fiber glass solar screening that is produced with a ribbed pattern woven in the warp direction. The applicability of this specification to vinyl-coated fiber glass type solar screening of a non-rib, a double rib (ribs in both warp and filling direction), or a filling rib construction is not known.

1.2 This specification shows the definitions, general requirements, and physical requirements for commercial standard vinyl-coated fiber glass solar screening designed and woven for installation in any dwelling, building, or structure for the purpose of providing a significant reduction in solar heat gain, while providing outward view and interior light. Solar screening provides a structure that has insect-restraining capabilities equivalent to standard insect screening.

NOTE 1—For information on standard insect screening, see Specification D 3656.

1.3 This specification shows the values in both SI units and inch-pound units. “SI” 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 customary units used in the United States. The values stated in either SI units or in other units shall be regarded separately as standard. The values expressed in each system may not be exact equivalents; therefore, each system must be used independently of the other without combining in any way.

1.4 The following precautionary caveat pertains only to the test method portion, Sections 8-21 of this specification: *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:

- D 76 Specification for Tensile Testing Machines for Textiles²
- D 123 Terminology Relating to Textiles²
- D 578 Specification for Glass Fiber Strands²
- D 883 Terminology Relating to Plastics³
- D 1776 Practice for Conditioning Textiles for Testing²
- D 3374 Specification for Vinyl-Coated Glass Yarns⁴
- D 3656 Specification for Insect Screening and Louver Cloth Woven from Vinyl-Coated Glass Fiber Yarn⁴
- D 3773 Test Methods for Length of Woven Fabric⁴
- D 3774 Test Method 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 Fabric⁴
- D 4909 Test Method for Color Stability of Vinyl-Coated Glass Textiles to Accelerated Weathering⁴
- D 4912 Test Method for Fabric Stability of Vinyl-Coated Glass Yarn Insect Screening and Louver Cloth⁴
- D 4963 Test Method for Ignition Loss of Glass Strands and Fabrics⁴
- D 5035 Test Method for Breaking Force and Elongation of Textile Fabrics (Strip Method)⁴
- E 171 Specification for Standard Atmospheres for Conditioning and Testing Flexible Barrier Materials⁵

2.2 AATCC Standard:⁶

Evaluating Procedure 1, Grey Scale for Color Change.

2.3 ANSI ASHRAE Standard:⁷

Standard 74-1988, Method of Measuring Solar-Optical Properties of Materials

2.4 Federal Test Method Standards:⁸

No. 191, Method 5872, Effect of High Temperature on Cloth Blocking, Textile Test Methods

No. 191, Method 5903, Flame Resistance of Cloth, Vertical,

² Annual Book of ASTM Standards, Vol 07.01.

³ Annual Book of ASTM Standards, Vol 08.01.

⁴ Annual Book of ASTM Standards, Vol 07.02.

⁵ Annual Book of ASTM Standards, Vol 15.09.

⁶ Available from American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709.

⁷ Available from American Society of Heating, Refrigeration, and Air-Conditioning Engineers, 1791 Tullie Circle N.E., Atlanta, GA 30329.

⁸ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

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