



Designation: D1668/D1668M – 97a (Reapproved 2021)

Standard Specification for Glass Fabrics (Woven and Treated) for Roofing and Waterproofing¹

This standard is issued under the fixed designation D1668/D1668M; 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.

*This standard has been approved for use by agencies of the U.S. Department of Defense.
This specification replaces Federal Specification HH-C-466.*

1. Scope

1.1 This specification covers finished treated (coated) woven-glass fabrics coated with either asphalt, coal-tar pitch, or an organic resin compatible with the roofing, waterproofing, or other usage as specified by the purchaser.

1.2 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in nonconformance with the standard.

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

D123 Terminology Relating to Textiles

D146/D146M Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing

D579/D579M Specification for Greige Woven Glass Fabrics

D1079 Terminology Relating to Roofing and Waterproofing

D3775 Test Method for End (Warp) and Pick (Filling) Count of Woven Fabrics

D3776/D3776M Test Methods for Mass Per Unit Area (Weight) of Fabric

¹ This specification is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is the direct responsibility of Subcommittee D08.04 on Felts, Fabrics and Bituminous Sheet Materials.

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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.

3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to Terminology **D123** or **D1079**.

4. Classification of Fabric Treatments with Generally Applicable Usage

4.1 *Type I, Asphalt Treated*—Type I is suitable for use with all asphalts and asphalt-based compounds.

4.2 *Type II, Coal-Tar Pitch Treated*—Type II is suitable for use with all coal-tar pitches and coal-tar pitch-based compounds (**Note 1**).

4.3 *Type III, Organic Resin Treated*—The purchaser and supplier shall agree on an organic resin that is compatible with or is suitable for, or both, the plying liquid plying materials either specified or to be used. This organic resin shall not be water soluble.

NOTE 1—In some instances the purchaser may specify the use of Type I or II for systems using other than coal-tar bitumens or asphalt.

5. Materials and Manufacture

5.1 The untreated (greige) scrim (open basket weave) or leno (locked weave) fabrics shall conform to the requirements as specified in **Table 1**.

5.2 In the process of manufacture, the fibers of the untreated glass fabric shall be thoroughly and uniformly coated using equipment which, in combination, handles the fabric and uses a machine speed in a total process that will not injure or distort the weave of the fabric.

5.3 Glass fabric is usually woven in nominal widths of 0.91, 1.83, and 2.74 m [36, 72, and 108 in.] by the weaving mills. Extra warp (the length of the fabric) threads are included in 1.83 and 2.74-m [72 and 108-in.] wide fabrics to obtain incremental fabric roll widths of 0.91 m [36 in.]. These extra warp threads with a slitting space between each set (a set of two) of bunched warp threads create a duplicate or “dupe” selvage with a “brush” edge created by the cut fill threads instead of the usually wrapped fill threads seen in a smooth