



Designation: D 4601 – 98

## Standard Specification for Asphalt-Coated Glass Fiber Base Sheet Used in Roofing<sup>1</sup>

This standard is issued under the fixed designation D 4601; 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 approval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

*This standard has been approved for use by agencies of the Department of Defense.*

### 1. Scope

1.1 This specification covers asphalt impregnated and coated glass fiber base sheet, with or without perforations, for use as the first ply of the built-up roofing. When not perforated, this sheet is suitable for use as a vapor retarder, with a solid mopping of asphaltic material, under roof insulation or between multiple layers of roof insulation.

1.2 The values stated in inch-pound units are to be regarded as the standard.

### 2. Referenced Documents

#### 2.1 ASTM Standards:

D 146 Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing<sup>2</sup>

D 228 Test Methods for Asphalt Roll Roofing, Cap Sheets, and Shingles<sup>2</sup>

D 1079 Terminology Relating to Roofing, Waterproofing, and Bituminous Materials<sup>2</sup>

### 3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to Terminology D 1079.

### 4. Classification

4.1 Asphalt impregnated and coated glass fiber base sheet, Type I and Type II, are covered by this specification.

### 5. Materials and Manufacture

5.1 The mat shall be a thin, porous mat of uniformly distributed glass fibers, with or without additional reinforcing strands of glass yarn, and bonded with a water-resistant resinous binder.

5.2 In the process of manufacture, a single thickness of glass fiber mat shall be impregnated with hot asphalt, coated on one or both sides with a hot asphaltic material, and permitted to be surfaced with mineral surfacing.

5.3 The impregnating and coating material shall be a hot-applied asphalt permitted to be compounded with a mineral stabilizer.

5.4 The base sheet may be faced with a kraft paper on the bottom side.

### 6. Physical Requirements, Dimensions, and Masses

6.1 The material shall conform to the physical requirements, dimensions, and masses described in Table 1 and Table 2.

TABLE 1 Physical Requirements<sup>A</sup>

Description	Type I	Type II
Breaking strength, minimum lbf/in (kN/m) longitudinal and transverse	22 (3.9)	44 (7.7)
Pliability, ½ in. (13 mm) radius		
Maximum failures, 10 specimens	0	0

<sup>A</sup> To prevent the asphalt glass fiber base sheet from slipping from between the jaws of the tensile testing machine, insert a thin strip of soft gasket rubber between the felt in each of the four jaw faces of the machine.

It may have small pin holes throughout the sheet.

6.2 Perforated material shall conform to the physical requirements, dimensions, and masses described in Tables 1-3. It may have small pin holes throughout the sheet.

6.3 The finished product shall not crack nor be so sticky as to cause tearing or other damage upon being unrolled at temperatures between 40 and 140°F (4 and 60°C).

### 7. Workmanship, Finish, and Appearance

7.1 The finished material shall be uniformly impregnated and coated with asphalt. It shall be free of visible defects such as holes, ragged or untrue edges, breaks, cracks, tears, and protrusions. This is not to exclude perforations for the specific purpose of providing for venting of gases during application or small pin holes.

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D-8 on Roofing, Waterproofing, and Bituminous Materials and is the direct responsibility of Subcommittee D08.04 on Felts and Fabrics for Bituminous Roofing and Waterproofing.

Current edition approved Jan. 10, 1998. Published September 1998. Originally published as D 4601 – 86. Last previous edition D 4601 – 97a.

<sup>2</sup> *Annual Book of ASTM Standards*, Vol 04.04.