Designation: D 3909 – 97b

Standard Specification for Asphalt Roll Roofing (Glass Felt) Surfaced With Mineral Granules[1]

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This standard has been approved for use by agencies of the Department of Defense. This specification replaces Federal Specification SS-R-630, Class 3.

1. Scope

1.1 This specification covers asphalt-impregnated and coated glass felt roll roofing surfaced on the weather side with mineral granules, for use as a cap sheet in the construction of built-up roofs.

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

2. Referenced Documents

2.1 *ASTM Standards:*

D 228 Test Methods for Asphalt Roll Roofing, Cap Sheets, and Shingles[2]

D 1079 Terminology Relating to Roofing, Waterproofing, and Bituminous Materials[2]

3. Terminology

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

4. Materials and Manufacture

4.1 The glass felt shall be a thin, porous sheet composed predominately of fine glass fibers uniformly deposited in a nonwoven pattern. The felt may be reinforced with random, or parallel oriented glass yarns, or both, which may be gathered or twisted, bonded or unbonded. The felt shall contain a water-insoluble agent.

4.2 In the process of manufacture, the glass mat shall be uniformly impregnated and coated on both sides with an asphaltic material, permitted to be compounded with a mineral stabilizer.

4.3 The weather side shall be uniformly surfaced with mineral granules firmly embedded in the asphaltic coating, except for any selvage.

4.4 The reverse side shall be covered with a material to prevent sticking in the roll.

5. Physical Properties

5.1 The material shall conform to the dimensions and masses prescribed in Table 1 and areas prescribed in Table 2.

5.2 The finished product shall not crack nor be so sticky as to cause tearing or other damage upon being unrolled at temperatures between 50 and 140°F (10 and 60°C).

5.3 *Pliability at 77°F (25°C)*—At least eight strips out of ten from the granule-surfaced portion of the sheet shall not crack when tested in accordance with Section 16 of Test Methods D 228.

5.4 *Loss and Behavior on Heating*—There shall be no more than 1.5 % volatile loss, and the granular surfacing shall not slide more than 1⁄16 in. (2 mm) when tested in accordance with Section 17 of Test Methods D 228.

6. Workmanship, Finish, and Appearance

6.1 The glass felt shall be thoroughly and uniformly impregnated with asphalt and shall show no uncoated fibers. The fiber pattern may be discernible on the back side.

6.2 The surface of the weather side shall be uniform in finish and texture. The mineral granules shall be uniformly distributed in a smooth layer over the entire surface, except for any selvage, and shall be firmly embedded in the asphalt coating.

6.3 When a selvage is provided, the line of demarcation between the surfaced and unsurfaced portions of the sheet shall be straight and parallel to the edges of the sheet. A suitable material shall be applied to prevent sticking of the coated selvage in the roll.

6.4 The asphalt coating and the material applied to the reverse side of the sheet to prevent sticking in the roll shall be uniform over the entire surface.

[1] 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.

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[2] *Annual Book of ASTM Standards*, Vol 04.04.