



Standard Specification for Asphalt Roll Roofing (Glass Felt) Surfaced With Mineral Granules¹

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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 Shingles²

D 1079 Terminology Relating to Roofing, Waterproofing, and Bituminous Materials²

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 $\frac{1}{16}$ 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.

6.5 The finished material shall be free of visible defects such as holes, ragged or untrue edges, breaks, cracks, tears, protuberances, and indentations.

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.

TABLE 1 Dimensions and Masses of Asphalt Roll Roofing (Glass Felt) Surfaced with Mineral Granules^A

Width of roll, in. (mm)	36 (914) ± 0.7 % or as agreed upon between purchaser and supplier
Average mass per roll, exclusive of wrapping and packaging material, min, lb (kg):	
No selvage	69 (31.3)
2-in. (50-mm) selvage	68 (30.8)
4-in. (100-mm) selvage	70 (31.8)
Mass per unit area of granule-surfaced sheet, min, lb/100 ft ² (g/m ²)	63.2 (3085)
Mass per unit area of desaturated glass felt, min, lb/100 ft ² (g/m ²)	1.7 (83)
Mass per unit area of mineral matter passing a 3.35-mm (No. 6) sieve and retained on a 212-µm (No. 70) sieve, min, lb/100 ft ² (g/m ²)	24 (1170)
Mass of mineral matter passing a 212-µm (No. 70) sieve based on the mass of the coating asphalt and the mineral matter passing the 212-µm (No. 70) sieve, max, %	55
Moisture at point of manufacture, max, % ^A	1.0

^AAt time of manufacture. Products with higher moisture content at time of installation may cause hot materials to foam, creating interply voids that may result in blisters.

TABLE 2 Area of Roll Roofing with Mineral Granules

Selvage Width, in. (mm)	Gross Area per Roll, ft ² (m ²)	
	100-ft ² Coverage	9.29-m ² Coverage
none	108 ± 1 %	10.03 ± 1 %
2 (50)	108 ± 1 %	10.03 ± 1 %
4 (100)	114 ± 1 %	10.6 ± 1 %

7. Sampling and Test Methods

7.1 Sample the material and determine the properties enumerated in this specification in accordance with Test Methods D 228.

8. Inspection

8.1 *Inspection*—Inspection shall be in accordance with the requirements of this specification.

8.2 *Inspection Alternatives*—Alternative inspection requirements shall be determined by and as agreed upon between the purchaser and the supplier.

9. Rejection and Resubmittal

9.1 *Failure to Conform*—Failure to conform to any of the requirements as stated in this specification constitutes grounds for rejection.

9.2 *Rejection Redress*—The supplier shall have the right to inspect the rejected materials. The supplier and the purchaser shall agree to the quantity of rolls deemed unacceptable. The supplier shall then have the right to submit the same number of new rolls as replacement.

10. Packaging and Package Marking

10.1 Unless otherwise agreed upon between the supplier and purchaser, each product package shall be plainly marked with the supplier's name, the product brand, the ASTM designation, and type of bitumen if not evident in the label name of the product.

10.2 The rolls shall be securely wrapped or banded in a manner that completely encircles the roll and will prevent slipping or unrolling.

10.3 No roll shall contain more than two pieces, and no more than 3 % of the rolls in any lot shall contain two pieces. If a roll contains a manufacturing splice, the splice shall be clearly marked.

11. Keywords

11.1 asphalt roll roofing; glass felt; mineral granules

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