



Designation: D 3018 – 003

Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules¹

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

1. Scope

1.1 This specification covers granule-surfaced asphalt roofing shingles that meet the conditions for Class A fire test, behavior on heating, and wind testing of Type I shingles.

1.2 Shingles meeting this specification are intended to be applied with a headlap of not less than 51 mm (2 in.).

1.3 The values stated in acceptable metric SI units are to be regarded as the standard. The values given in parentheses are provided for information purposes only.

2. Referenced Documents

2.1 *ASTM Standards:*

¹ This specification is under the jurisdiction of ASTM Committee D08 on Roofing, Waterproofing, Roofing and Bituminous Materials Waterproofing and is the direct responsibility of Subcommittee D08.02 on Prepared Roofings, Shingles, and Siding Materials.

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D 228 Test Methods for Sampling, Testing, and Analysis of Asphalt Roll Roofing, Cap Sheets, and Shingles Used in Roofing and Waterproofing²

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

D 3161 Test Method for Wind Resistance of Asphalt Shingles (Fan-Induced Method)²

E 108 Test Methods for Fire Tests of Roof Coverings³

3. Terminology

3.1 *Definition:*

3.1.1 *glass mat*—for testing purposes in accordance with Test Methods D 228, glass mat shall be considered as felt.

3.2 For definitions of terms used in this specification, see Terminology D 1079.

4. Classification

4.1 Asphalt shingles covered by this specification are of two types:

4.1.1 *Type I*—Self-sealing.

4.1.2 *Type II*—Non-self-sealing.

5. Materials and Manufacture

5.1 The shingles covered by this specification shall consist of organic felt or glass mat(s) saturated or impregnated and coated on both sides with a hot asphaltic material and completely surfaced on the weather side with mineral granules embedded in the coating.

5.2 The hot asphaltic material used to saturate or impregnate and coat the organic felt or glass mat(s) may be compounded with a mineral stabilizer.

5.3 The reverse side of the shingles shall be covered with a suitable material to prevent the shingles from sticking together in the package.

5.4 Type I shingles shall have a factory-applied adhesive that will seal the shingles together after application.

6. Physical Requirements

6.1 Shingles shall not stick together in the package so as to cause damage upon being unpacked at ambient temperatures above 10° C (50°F).

6.2 *Loss and Behavior on Heating* —There shall be not more than 1.5 % average loss of volatile matter, and the granular surfacing shall not slide more than ~~1.6~~ 2 mm (¹/₁₆ in.).

6.3 *Fire Test Classification*—Shingles shall pass all of the Class A fire exposure tests.

6.4 *Wind Resistance*— Type I shingles shall pass the wind-resistance test (see 9.1.3).

7. Dimensions and Permissible Variations

7.1 The form and size of the shingles shall be as agreed upon by the purchaser and seller.

7.2 The shingles shall not vary in length more than ± 3.2 mm (¹/₈ in.) from nominal dimensions established for each size, except that the length of shingles without cutouts shall not vary more than ± 6.4 mm (¹/₄ in.). The width of the shingles shall not vary more than ± 6.4 mm (¹/₄ in.).

8. Workmanship, Finish, and Appearance

8.1 The organic felt or glass mat(s) shall be uniformly saturated or impregnated with asphalt and shall show no untreated spots at any point upon cutting 50-mm (2-in.) wide strips at random across the entire width of the shingle and splitting them open for their full length.

8.2 The weather surface shall be uniform in finish and may be embossed to simulate a grain texture. The mineral granules shall cover the entire surface and shall be firmly embedded in the asphalt coating. The granules shall not have ruptured the fibers of the felt or mat.

8.3 The finished shingles shall be free of visible defects such as holes, edges not cleanly cut, rents, cracks, indentations, or lumps of coating.

9. Sampling and Test Methods

9.1 Sample the material in accordance with Test Methods D 228 and determine conformance to the requirements of this specification in accordance with the following test methods:

9.1.1 *Loss and Behavior on Heating* —Test Methods D 228.

9.1.2 *Fire Test Classification*—Test Methods E 108, Class A Tests.

² Annual Book of ASTM Standards, Vol 04.04.

³ Annual Book of ASTM Standards, Vol 04.07.

9.1.3 *Wind Resistance*— Test Method D 3161.

10. Inspection

10.1 Inspection of material shall be made as agreed upon by the purchaser and the seller as part of the purchase contract.

11. Rejection and Resubmittal

11.1 Failure to conform to any one of the requirements prescribed in this specification shall constitute grounds for rejection. In case of rejection, the seller shall have the right to reinspect the rejected shipment and resubmit the lot after removal of those packages not conforming to the specified requirement.

12. Packaging, Marking, and Shipping

12.1 The shingles shall be packed for shipment to ensure acceptance by common carrier for interstate transportation and to afford adequate protection from normal hazards of handling.

12.2 Each package shall be plainly marked with the name and brand of the manufacturer; the area of roof surface covered per package; and the style, type, and color of the product. Directions for application shall be included in at least every square of shingles.

13. Keywords

13.1 asphalt shingles; Class A Shingles; granule-surface shingles; wind resistance

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