



Designation: D3018/D3018M – 22

Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules¹

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1. Scope

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

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 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.

1.4 *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

- D228/D228M Test Methods for Sampling, Testing, and Analysis of Asphalt Roll Roofing, Cap Sheets, and Shingles Used in Roofing and Waterproofing
- D1079 Terminology Relating to Roofing and Waterproofing
- D3161/D3161M Test Method for Wind Resistance of Steep Slope Roofing Products (Fan-Induced Method)
- E108 Test Methods for Fire Tests of Roof Coverings

3. Terminology

3.1 Definitions:

3.1.1 *glass mat*—for testing purposes in accordance with Test Methods D228/D228M, glass mat shall be considered as felt.

¹ This specification is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is the direct responsibility of Subcommittee D08.02 on Steep Roofing Products and Assemblies.

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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.

3.2 For definitions of terms used in this specification, see Terminology D1079.

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. All surfaces intended to be exposed to the weather, including any cutouts or other separations, when the product is applied in accordance with the manufacturer's/seller's instructions, shall be surfaced with mineral granules embedded in the asphalt coating.

5.2 It is permitted for the hot asphaltic material used to saturate or impregnate and coat the organic felt or glass mat(s) to 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 2 mm [$\frac{1}{16}$ in.].

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

6.4 *Wind Resistance*—Shingles shall be classified in accordance with 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 [$\frac{1}{8}$ in.] from nominal dimensions established for each size, except that the length of shingles without cutouts shall not vary more than ± 6.4 mm [$\frac{1}{4}$ in.]. The width of the shingles shall not vary more than ± 6.4 mm [$\frac{1}{4}$ 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 is permitted to be embossed to simulate a grain texture. The mineral granules shall cover all surfaces intended to be exposed to the weather when the product is applied in accordance with the manufacturer's/seller's instructions, 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 **D228/D228M** 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 **D228/D228M**.

9.1.2 *Fire Test Classification*—Test Methods **E108**, Class A Tests.

9.1.3 *Wind Resistance*—Test Method **D3161/D3161M**.

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 Unless otherwise agreed upon between the supplier and the purchaser, each product package shall be marked plainly with the supplier's name, product brand, the area of the roof surface covered, ASTM designation, fire classification in accordance with Test Methods **E108**, wind classification in accordance with Test Method **D3161/D3161M**, style, 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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