



Designation: D2824/D2824M – 13

# Standard Specification for Aluminum-Pigmented Asphalt Roof Coatings, Nonfibered, and Fibered without Asbestos<sup>1</sup>

This standard is issued under the fixed designation D2824/D2824M; 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 reapproval. 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-based, aluminum-pigmented roof coatings suitable for application to roofing or masonry surfaces by brush or spray.

1.2 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 non-conformance with the standard.

1.3 The following precautionary caveat pertains only to the test method portion, Section 8, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

## 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

[C1549 Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer](#)

[D962 Specification for Aluminum Powder and Paste Pigments for Paints](#)

[D4798 Practice for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials \(Xenon-Arc Method\)](#)

[D6511 Test Methods for Solvent Bearing Bituminous Compounds](#)

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is the direct responsibility of Subcommittee D08.05 on Solvent-Bearing Bituminous Compounds for Roofing and Waterproofing.

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<sup>2</sup> 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. Classification

3.1 *Type I*—Nonfibered, containing no fiber.

3.2 *Type III*—Fibered, containing no asbestos fiber.

## 4. Materials and Manufacture

4.1 Asphalt-based, aluminum-pigmented roof coatings shall consist of an asphalt base, volatile petroleum solvents, and a leafing type of aluminum pigment conforming to the requirements of Specification D962, with or without fiber added. They shall be mixed to a smooth, uniform consistency suitable for application by brush, roller, or by spraying.

## 5. Composition

5.1 Asphalt-based, aluminum-pigmented roof coatings complying with this specification shall conform to the following composition limits:

|  | Type I | Type III |
|--|--------|----------|
| Water, max, %                                | 0.3    | 0.3      |
| Nonvolatile matter (NVM), min, %             | 40     | 40       |
| Insoluble in CS <sub>2</sub> , max, % of NVM | 40     | 50       |
| Metallic aluminum, min, %                    | 11     | 9        |

## 6. Physical Requirements

6.1 *Uniformity*—After a thoroughly stirred sample has stood for 72 h at room temperature  $23 \pm 2^\circ\text{C}$  [ $73.4 \pm ^\circ\text{F}$ ] in a closed container, it shall show no separation of solvent or settling that can not be overcome by moderate stirring.

6.2 *Consistency*—The roof coating shall be of a consistency that will spread readily and permit application by brush, roller, or spray to produce a film in which the aluminum pigment leafs to form a bright reflective surface on prepared roofing, saturated felt, and metal surfaces at ambient temperatures above  $10^\circ\text{C}$  [ $50^\circ\text{F}$ ].

6.2.1 *Type I*—Consistency at  $25^\circ\text{C}$  [ $77^\circ\text{F}$ ] shall be between 20 and 30 Stormer s/100 revolutions of the paddle-type rotor with a 100-g load in addition to the standardizing load.

6.2.2 *Type III*—Consistency at  $25^\circ\text{C}$  [ $77^\circ\text{F}$ ] shall be between 15 and 90 Stormer s/100 revolutions of the propeller-type rotor with a 300-g load in addition to the standardizing load.