



Designation: D 2824 – 04

Standard Specification for Aluminum-Pigmented Asphalt Roof Coatings, Nonfibered, Asbestos Fibered, and Fibered without Asbestos¹

This standard is issued under the fixed designation D 2824; 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 (ϵ) 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 roof coatings suitable for application to roofing or masonry surfaces by brush or spray.

1.2 The values stated in SI units are to be regarded as the standard. The values in parentheses are for information only.

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:²

D 962 Specification for Aluminum Powder and Paste Pigments for Paints

D 4798 Test Method for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon-Arc Method)

D 6511 Test Methods for Solvent Bearing Bituminous Compounds

3. Classification

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

3.2 *Type II*—Fibered, containing asbestos fiber.

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

4. Materials and Manufacture

4.1 Asphalt-based, aluminum roof coatings shall consist of an asphalt base, volatile petroleum solvents, and a leafing type

of aluminum pigment conforming to the requirements of Specification D 962, 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 roof coatings complying with this specification shall conform to the following composition limits:

	Type I	Type II or Type III
Water, max, %	0.3	0.3
Nonvolatile matter (NVM), min, %	40	40
Insoluble in CS ₂ , 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°C (50°F).

6.2.1 *Type I*—Consistency at 25°C (77°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 II and Type III*—Consistency at 25°C (77°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.

6.3 *Reflectance*—The percent initial luminous reflectance of coatings, determined on samples before and after high temperature shelf aging, shall be not less than 50 % when tested in accordance with Test Methods D 6511, Section 15, and not less than 50 % after 1000 h accelerated weathering testing in accordance with Test Method D 4798.

¹ 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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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.