



Designation: C 222 – 97

Standard Specification for Asbestos-Cement Roofing Shingles¹

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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 asbestos-cement roofing shingles, including accessories, designed to provide the weather-exposed surfaces on roofs of buildings.

1.2 Shingles supplied under this specification are of the following types as to shape and method of application:

1.2.1 *American Method*—Uniform thickness, generally rectangular in shape, with straight or irregular edges. They are intended to be laid with a minimum 2-in. (51-mm) head lap and with no side lap and to provide double coverage. They may be made either as individual or multiple units to simulate the appearance of individual shingles.

1.2.2 *Strip Shingles*—Uniform thickness, various shapes and designs to provide top lap only and shingle coverage under the butt joints, with the design such that it provides only single coverage.

1.2.3 *Strip Shingles*—Uniform thickness, various shapes and designs to provide top lap only and shingle coverage under the butt joints, with the design such that it provides only single coverage.

1.2.4 *Dutch or Scotch Method (Including Ranch Design)*—Uniform thickness with straight or irregular edges and designed to be laid with a lap at the top and on one side of each shingle.

1.2.4.1 *Dutch*—Square in shape.

1.2.4.2 *Ranch*—Oblong-rectangular in shape, with the greater dimension horizontal.

1.2.5 *French or Hexagonal Method*—Uniform thickness, square in shape, having at least three corners clipped to give the desired pattern when the shingles are laid with their diagonals perpendicular to the eave of the roof, with their apex sides lapped.

1.3 The values stated in inch-pound units are to be regarded as the standard. The values stated in parentheses are for information only.

2. Referenced Documents

2.1 ASTM Standards:

C 459 Test Methods of Sampling and Testing Asbestos-Cement Flat Sheets, Roofing and Siding Shingles, and Clapboards²

2.2 Federal Standard:

Fed. Std. No. 123 Marking for Domestic Shipment (Civilian Agencies)³

2.3 Military Standard:

MIL-STD-129 Marking for Shipment and Storage³

2.4 Other Documents:

Uniform Freight Classification Rule⁴

National Motor Freight Classification Rules⁵

3. Materials and Manufacture

3.1 Asbestos-cement roofing shingles shall be composed of a combination of asbestos fiber and portland cement or portland blast-furnace slag cement, and not more than 1 weight % of organic fiber, with or without the addition of curing agents, water-repellent substances, mineral fillers, coatings, pigments, or mineral granules, formed under pressure and cured to meet the physical requirements of this specification.

4. Physical Requirements

4.1 All measurements and tests necessary for determining the conformity of the asbestos-cement shingles with this specification shall be made in accordance with Methods C 459.

4.2 *Flexural Strength*—The average breaking load obtained by loading equally and simultaneously at both one-third points of the test span.

4.3 *Deflection*—The average deflection at mid-span at maximum load obtained by loading equally and simultaneously at both one-third points of the test span.

² Annual Book of ASTM Standards, Vol 04.05.

³ Available from Standardization Documents, Order Desk, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA. 19111-55094, Attn: NPODS.

⁴ Available from the Uniform Classification Commission Room 1106, 222 S. Riverside Plaza, Chicago, IL. 60606.

⁵ Available from National Motor Freight Inc., 1616 P. St., N. W., Washington, DC 20036.

¹ This specification is under the jurisdiction of ASTM Committee C-17 on Fiber-Cement Products and is the direct responsibility of Subcommittee C17.03 on Asbestos Cement Sheet Products and Accessories.

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