



Designation: C 221 – 98

Standard Specification for Corrugated Asbestos-Cement Sheets¹

This standard is issued under the fixed designation C 221; 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.

1. Scope

1.1 This specification covers corrugated asbestos-cement sheet products and lists accessories used in conjunction with application. Corrugated asbestos-cement sheets are designed for the following purposes:

1.1.1 To provide weather-resistant surfaces of roofs, walls, and other elements of buildings and structures, and

1.1.2 For decorative as well as functional uses in any area where a corrugated sheet may be advantageous.

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

1.3 *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 The following documents of the issue in effect on date of material procurement form a part of this specification to the extent referenced herein:

2.2 *ASTM Standards:*

C 150 Specification for Portland Cement²

C 595M Specification for Blended Hydraulic Cements²

D 2946 Terminology for Asbestos and Asbestos-Cement Products³

2.3 *Federal Standard:*

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

2.4 *Military Standard:*

MIL-STD-129 Marking for Shipment and Storage⁴

3. Terminology

3.1 *Definitions:*

3.1.1 *density*—mass per unit volume, expressed in g/cm³ (or lb/ft³).

3.1.2 *flexural strength*—the average breaking load in newtons per metre of width (or lbf/ft of width) of dried specimens loaded as simple beams on a 762 mm (30 in.) span with the load applied equally and simultaneously at both one-third points of the span.

3.1.2.1 *Discussion*—The flexural performance is defined as the moment capacity in N.m/m (or ft. lbf/ft) of width obtained from the product of flexural strength and span divided by 6.

3.1.3 *pitch*—the distance from center point to center point of adjacent crests of an asbestos-cement product of corrugated or grooved cross-section.

3.1.4 For additional definitions refer to Terminology D 2946.

3.2 *Definitions of Terms Specific to This Standard: Description of Term Specific to This Standard:*

3.2.1 *water absorption*—for the purpose of this specification, the increase in mass of the test specimen is expressed as a percentage of its dry mass after immersion in water for 24 h.

4. Classification

4.1 The asbestos-cement corrugated sheets furnished under this specification shall be manufactured to meet a minimum bending moment determined by loading equally and simultaneously at both one-third points of the test span. The types of asbestos-cement corrugated sheets manufactured are given in Table 1.

5. Materials and Manufacture

5.1 Corrugated asbestos-cement sheets, and accessory shapes except for filler strips, shall be composed of a mixture of asbestos fiber and hydraulic cement, as specified in Specifications C 150 and C 595, with not more than 1 weight % of organic fiber. The product may contain inert mineral pigments, mineral fillers, curing agents, and coatings, and shall be formed under pressure and cured.

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.

Current edition approved Sept. 10, 1998. Published March 1999. Originally published as C 221 – 49 T. Last previous edition C 221 – 91(1995)¹.

² *Annual Book of ASTM Standards*, Vol 04.01.

³ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

⁴ *Annual Book of ASTM Standards*, Vol 04.05.