



Standard Specification for Corrugated Asbestos-Cement Sheets for Bulkheading¹

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1. Scope

1.1 This specification covers the types, physical properties, and dimensions of bulkhead corrugated asbestos-cement sheets designed to provide sheet piling for erosion control along fresh-water lake shores and inland waterways of fresh or salt water.

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

1.3 **Warning**—Breathing of asbestos dust is hazardous. Asbestos and asbestos products present demonstrated health risks for users and for those with whom they come into contact. In addition to other precautions, when working with asbestos-cement products, minimize the dust that results. For information on the safe use of chrysotile asbestos, refer to “Safe Use of Chrysotile: A Manual on Preventive and Control Measures.”²

1.4 The following precautionary caveat pertains only to the test method portion, Sections 9 – 12 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*:³

C208 Specification for Cellulosic Fiber Insulating Board

C460 Terminology for Asbestos-Cement (Withdrawn 2001)⁴

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

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² Available from The Asbestos Institute, <http://www.chrysotile.com/en/sr/use/manual.htm>.

³ 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.

⁴ The last approved version of this historical standard is referenced on www.astm.org.

2.2 *Federal Standard*:⁵

Fed. Std. No. 123 Marking for Shipment (Civil Agencies)

2.3 *Military Standard*:⁵

MIL-STD-129 Marking for Shipment and Storage

2.4 *BNQ Standard*:⁶

BNQ Standard 3807-098 Vulcanized Rubber-Hardness Determination

3. Terminology

3.1 *Definitions*:

3.1.1 *flexural strength, n*—the transverse breaking load in newtons per meter of width (lbf/ft of width) of saturated sheets when loaded on a span of 1.524 m (5 ft) with the load applied equally and simultaneously at both one-third points of the span.

3.1.2 Refer to Terminology C460 for additional terminology.

4. Classification

4.1 The corrugated asbestos-cement sheets covered by this specification are classified on the basis of the bending moment capacity of saturated units.

Designation (Note 1)	Bending Moment Capacity (Minimum)
Type 1	1270 N-m/m of width (285 lbf-ft/ft of width)
Type 2	2250 N-m/m of width (505 lbf-ft/ft of width)
Type 3	3600 N-m/m of width (790 lbf-ft/ft of width)
Type 10	4450 N-m/m of width (1000 lbf-ft/ft of width)
Type 18	5800 N-m/m of width (1300 lbf-ft/ft of width)

NOTE 1—The bending moment capacity required for a given installation depends upon many variables. Its determination is illustrated in the design manuals of the producing companies. The color coding for the various types of bulkhead corrugated is painted on one end of the sheet to designate type: Type 1-brown, Type 2-green, Type 3-red, Type 10-gray, Type 18-yellow.⁷

5. Materials and Manufacture

5.1 Corrugated asbestos-cement sheets for bulkheading shall be composed of a combination of asbestos fiber and

⁵ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094. Attn: NPODS.

⁶ Available from Bureau de Normalisation du Québec. Department of Industry and Commerce, 50 Saint Joseph Street East, Québec QC Canada G1K 3A5.

⁷ Design Manual for Asbestos-Cement Canal Bulkheads published by the Mineral Fiber Products Bureau. Available from the Asbestos Institute, 1130 Sherbrooke Street W, Suite 410, Montreal, QC Canada H3A 2M8.