



Designation: F1345 – 10a (Reapproved 2023)

Standard Specification for Zinc-5 % Aluminum-Mischmetal Alloy-Coated Steel Chain- Link Fence Fabric¹

This standard is issued under the fixed designation F1345; 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 zinc-5 % aluminum-mischmetal (Zn-5Al-MM) alloy-coated steel chain-link fence fabric, Zn-5Al-MM alloy-coated, before weaving.

1.2 The values stated in inch-pound units are to be regarded as the standard.

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

A90/A90M Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings
A491 Specification for Aluminum-Coated Steel Chain-Link Fence Fabric

A700 Guide for Packaging, Marking, and Loading Methods for Steel Products for Shipment

A817 Specification for Metallic-Coated Steel Wire for Chain-Link Fence Fabric and Marcellled Tension Wire

2.2 Federal Standard:³

Fed. Std. No. 123 Marking for Shipment, Civil Agencies

2.3 Military Standards:³

MIL-STD-129 Marking for Shipment and Storage

MIL-STD-163 Steel Mill Products, Preparation for Shipment and Storage

¹ This specification is under the jurisdiction of ASTM Committee F14 on Fences and is the direct responsibility of Subcommittee F14.40 on Chain Link Fence and Wire Accessories.

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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.

³ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, <http://www.dodssp.daps.mil>.

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *chain link fence fabric, n*—a fencing material made from steel wire helically wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling, or of twisting the ends of the wires to form the selvage of the fabric.

3.1.2 *diamond count, n*—the number of diamond openings from one edge of the fabric to the other. The diamond count of a given fabric shall begin at the first completed diamond at one edge and continue to the unfinished half or full opening at the other edge.

3.1.3 *knuckling, v*—a term used to describe the type of selvage obtained by interlocking adjacent pairs of wire ends and then bending the wire ends back into a loop. The loop shall be closed or nearly closed to a measurement less than the diameter of the wire.

3.1.4 *twisting, v*—a term used to describe the type of selvage obtained by twisting adjacent pairs of wire ends together in a close helix of 1½ machine turns, which is equivalent to three full twists, and cutting the wire ends at an angle. The wire ends beyond the twist shall be at least ¼ in. (6.4 mm) long. This type of selvage is not used on fabric with a mesh size of less than 2 in. (50.8 mm).

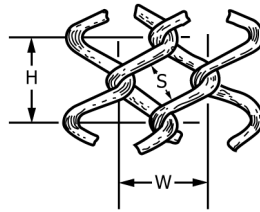
4. Ordering Information

4.1 Orders for chain-link fence fabric purchased to this specification shall include the following information:

- 4.1.1 Quantity (Section 13),
- 4.1.2 Size of mesh (Section 7),
- 4.1.3 Size of wire (Section 8),
- 4.1.4 Height of fabric (Section 9),
- 4.1.5 Diamond count, if specified (Section 6),
- 4.1.6 Type of selvage (Section 10),
- 4.1.7 Certification if required (Section 16),
- 4.1.8 Class of Coating (Section 11), and
- 4.1.9 ASTM designation and year of issue.

4.2 All rolls of fencing accepted by the purchaser shall be billed on the basis of the original footage of the rolls before sampling, unless changed by contractual arrangement.

NOTE 1—A typical ordering description is as follows: 25 rolls, 50 ft



Mesh Size, S	Height, H	Width, W
3/8 in. mesh (10 mm)	3/4 in. (19 mm)	3/4 in. (19 mm)
1/2 in. mesh (13 mm)	1 1/16 in. (24 mm)	1 5/16 in. (24 mm)
5/8 in. mesh (16 mm)	1 1/8 in. (29 mm)	1 1/8 in. (29 mm)

FIG. 1 Fence Fabric Mesh Dimensions for 3/8 in., 1/2 in., and 5/8 in.

11.1.1 *Class 1*—The weight of Zn-5Al-MM alloy coating shall not be less than 0.6 oz/ft² (183 g/m²) of uncoated wire surface.

11.1.2 *Class 2*—The weight of Zn-5Al-MM alloy coating shall not be less than 1.0 oz/ft² (305 g/m²) of uncoated wire surface.

11.2 The weight of coating shall be determined in accordance with Test Method A90/A90M.

12. Workmanship

12.1 Chain-link fence fabric shall be produced by methods recognized as good commercial practices. The zinc-5 % aluminium-mischmetal before-weaving fabric shall be woven using proven industry procedures to ensure a smooth consistent surface without penetrating to the substrate, except at the selvage cut ends, see Note 3.

12.2 Excessive roughness, blisters, and flaking shall be noted. These and other defects, if present to any considerable extent, shall provide a basis for rejection.

NOTE 3—Rust formations on the cut ends of the wire at the fabric selvages are inherent characteristics of this material and do not warrant rejection of the fabric.

13. Standard Length of Rolls

13.1 The standard length of roll shall be 50 ft (15.24 m) ± 1 % except as otherwise agreed upon at the time of purchase.

13.2 The length of roll shall be determined by unrolling a roll of fabric on a flat surface and exerting tension by appropriate means to remove all slack. The tension applied shall not reduce the actual height of the fabric by more than 1/16 in./ft (5.3 mm/m) of height or by more than 1/2 in. (12.7 mm), whichever is less.

14. Sampling and Number of Tests

14.1 One roll from every 50 rolls or fraction thereof in a lot shall be taken at random as a sample for test purposes. In no case shall less than two samples be tested, except when the lot is less than 10 rolls, only one roll shall be selected for the sample.

14.2 Sample rolls selected shall be inspected for weave (Section 6), size of mesh (Section 7), diamond count (6.2), wire size (Section 8), height of fabric (Section 9), selvage (Section 10), and length (Section 13).

14.3 If any specimen tested fails to meet the requirements of this specification, the roll represented by the specimen shall be rejected and two additional rolls shall be inspected, both of which shall meet the requirements in every respect; otherwise, the lot represented by the samples may be rejected.

15. Inspection

15.1 Unless otherwise specified in the purchase order or contract, the manufacturer is responsible for the performance of all inspection and test requirements specified in this specification. Except as otherwise specified in the purchase order or contract, the manufacturer may use his own or any other suitable facilities for the performance of the inspection and test requirements unless disapproved by the purchaser at the time the order is placed. The purchaser shall have the right to perform any of the inspection and tests set forth in this specification when such inspections and tests are deemed necessary to ensure that the material conforms to prescribed requirements.

16. Certification

16.1 When specified in the purchase order or contract, a producer's or supplier's certification shall be furnished to the purchaser that the material was manufactured, sampled, tested, and inspected in accordance with this specification and has been found to meet the requirements. When specified in the purchase order or contract a report of the test results shall be furnished.

17. Packaging, Marking, and Loading

17.1 Each length of chain-link fence fabric shall be tightly rolled and firmly tied. Each roll shall carry a tag showing the type of coating, the specified wire size, mesh size, the specified length and height of fabric in the roll, Specification A491, and the name or mark of the manufacturer.

17.2 Unless otherwise specified, packaging, marking and loading for shipment shall be in accordance with recommended Guide A700.

17.3 When specified in the contract or order, and for direct procurement by or direct shipment to the U.S. government, when Level A is specified, preservation, packaging, and packing shall be in accordance with Level A requirements of MIL-STD-163.

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