Designation: F 1345 – 96 (Reapproved 2003)

Standard Specification for Zinc-5 % Aluminum-Mischmetal Alloy-Coated Steel Chain-Link Fence Fabric[1]

This standard is issued under the fixed designation F 1345; 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-5A1-MM) alloy-coated steel chain-link fence fabric, Zn-5A1-MM alloy-coated, before weaving.

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

2. Referenced Documents

2.1 *ASTM Standards:*

A 90 Test Method for Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles[2]

A 491 Specification for Aluminum-Coated Steel Chain-Link Fence Fabric[2]

A 700 Practices for Packaging, Marking and Loading Methods for Steel Products for Domestic Shipment[3]

A 817 Specification for Metallic-Coated Steel Wire for Chain Link Fence Fabric[2]

2.2 *Federal Standard:*

Fed. Std. No. 123 Marking for Shipment, Civil Agencies[4]

2.3 *Military Standards:*

MIL-STD-129 Marking for Shipment and Storage[4]

MIL-STD-163 Steel Mill Products, Preparation for Shipment and Storage[4]

3. Terminology

3.1 *Definitions of Terms Specific to This Standard*:

3.1.1 *chain link fence fabric*—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*—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*—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*—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 each, chain-link fence fabric, Zn-5A1-MM alloy-coated, 2 in. mesh, 0.148 in. wire, 60 in. high, knuckled both selvages, class 2 coating to Specification F 1345.

[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] *Annual Book of ASTM Standards*, Vol 01.06.

[3] *Annual Book of ASTM Standards*, Vol 01.05.

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

5. Materials

5.1 The wire from which the fabric is woven shall conform to all requirements of Specification A 817 for Type III coating, in the class of coating specified (Class 1 or Class 2).

6. Weave

6.1 The wire shall be woven throughout in the form of approximately uniform square mesh, having parallel sides and horizontal and vertical diagonals of approximately uniform dimensions. The top and bottom of the fabric shall be knuckled or twisted as specified in Section 10.

6.2 Typical diamond count for each standard height is shown in Table 1. Other diamond counts are permissible provided that they are consistent within a lot. The purchaser has the option to specify the diamond count (4.1.5).

7. Size of Mesh

7.1 The size of mesh shall be as indicated in Table 2.

7.2 The permissible variation from the specified size of mesh shall be ±⅛ in. [±3.2 mm] for all mesh sizes except 1 in., and ±1/16 in. [±1.6 mm] for 1 in. mesh size.

7.3 The size of mesh shall be determined by measuring the minimum clear distance between the wires forming the parallel sides of the mesh and determined as the average of two readings taken at right angles to each other.

8. Size of Wire

8.1 Chain-link fabric shall be fabricated from wire diameters as listed in Specification A 817, with a permissible variation from the specified diameter of the coated wire of ±0.005 in. [±0.13 mm].

9. Height of Fabric

9.1 Chain-link fabric shall be furnished in the standard heights shown in Table 2. The height of fabric shall be the overall dimension from ends of twists or knuckles. The permissible variation from the specified height shall be ±1 in. [±25 mm] for standard selvage.

10. Selvage

10.1 Unless otherwise specified by the purchaser, fabrics with 2- or 2⅛-in. [50- or 54-mm] mesh, in heights 60 in. [1520 mm] and under shall be knuckled at both selvages. Fabric 72 in. [1830 mm] high and over shall be knuckled at one selvage and twisted at the other.

TABLE 2 Sizes of Wire and Mesh[A]

Specified Diameter of Coated Wire, in.	Size, Coated Wire Gage	Size of Mesh, in.	Height of Fence Fabric, in.
0.192	6	2	36, 42, 48, 60, 72, 84, 96, 108, 120, 144
0.148	9	2	36, 42, 48, 60, 72, 84, 96, 108, 120, 144
0.148	9	1	36, 42, 48, 60, 72, 84, 96, 108, 120, 144
0.120	11	2	36, 42, 48, 60, 72, 84 . . . . .
0.120	11	1¾	. . . . . 96, 108, 120, 144
0.120	11	1	36, 42, 48, 60, 72, 84, 96, 108, 120, 144
0.113	1½1	2⅛	36, 42, 48, 60, 72 . . . . .

[A]See Appendix X1 for SI equivalents.

10.2 The selvages of fabrics with meshes of less than 2 in. [50 mm] shall be knuckled.

NOTE 2—**Caution:** Twisted selvages for fence fabric under 72 in. [1830 mm] in height are not recommended because of consumer safety considerations.

11. Weight of Coating

11.1 The weight of Zn-5A1-MM alloy coating on the fabric may be ordered in two coating weight classes as follows, in accordance with Specification A 817.

11.1.1 *Class 1*—The weight of Zn-5A1-MM alloy coating shall not be less than 0.6 oz/ft^2 [183 g/m^2] of uncoated wire surface.

11.1.2 *Class 2*—The weight of Zn-5A1-MM alloy coating shall not be less than 1.0 oz/ft^2 [305 g/m^2] of uncoated wire surface.

11.2 The weight of coating shall be determined in accordance with Test Method A 90.

12. Workmanship

12.1 Chain-link fence fabric shall be produced by methods recognized as good commercial practices.

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.

TABLE 1 Typical Diamond Count[A]

Nominal Diameter Coated Wire, in.	Size of Mesh, in.	Height of Fence Fabric, in.									
		36	42	48	60	72	84	96	108	120	144
0.192	2	10½	12½	13½	17½	20½	24½	27½	31½	34½	4½1
0.148	2	10½	12½	13½	17½	20½	24½	27½	31½	34½	41½
0.148	1	20	23	27	33	39	45	53	61	67	79
0.120	2	10½	12½	14½	17½	20½	24½				
0.120	1¾							31½	35½	39½	47½
0.120	1	20	23	27	33	39	45	53	61	67	79
0.113	2⅛	9½	11½	13½	16½	19½					

[A]See Appendix X1 for SI equivalents.