Designation: A392 – 11a (Reapproved 2017)

Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric[1]

This standard is issued under the fixed designation A392; 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-coated steel chain-link fence fabric, zinc coated either before or after weaving.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered 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

A370 Test Methods and Definitions for Mechanical Testing of Steel Products

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 Marcelled Tension Wire

B6 Specification for Zinc

2.2 *Federal Standard:*

Fed. Std. No. 123 Marking for Shipments (Civil Agencies)[3]

2.3 *Military Standards:*

MIL-STD-129 Marking for Shipment and Storage[3]

MIL-STD 163 Steel Mill Products, Preparation for Shipment and Storage[3]

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. Variations to knuckled or twisted selvages are permissible.

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 (½) or full opening at the other edge.

3.1.3 *knuckling*—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*—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 3 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 14),

4.1.2 Zinc coated after weaving or before weaving (Section 5),

4.1.3 Size of mesh (Section 7),

4.1.4 Size of wire (Section 8),

4.1.5 Height of fabric (Section 9),

4.1.6 Diamond count, if specified (Section 6),

4.1.7 Type of selvage (Section 10),

4.1.8 Class of coating (Section 11),

4.1.9 ASTM designation and year of issue, and

4.1.10 Certification if required (Section 17).

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

[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, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

each, chain-link fence fabric, zinc coated after weaving, 2-in. mesh, 0.148-in. wire, 60 in. high, knuckled both selvages, Class 2 coating to ASTM A392 - XX.

5. Materials

5.1 If zinc-coated before weaving, the wire from which the fabric is woven shall conform to all requirements of Specification A817 for Type II coating, in the class of coating specified (Class 4 or Class 5).

5.2 If zinc-coated after weaving, the base metal shall be steel of such quality and purity that, when drawn to the size of wire specified and coated with zinc after fabrication, the finished fencing shall be of uniform quality and have the properties and characteristics as prescribed in this specification.

5.3 *Zinc for Coating*—The slab zinc, when used for the coating, shall be any grade of zinc conforming to Specification B6.

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 A 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 (see 4.1.6).

7. Size of Mesh

7.1 The size of mesh shall be as indicated in Table 4.

7.2 The permissible variation from the specified size of mesh shall be ±⅛ in. (3.2 mm) for all mesh sizes larger than 1¼ in. (31.75 mm), and ±1⁄16 in. (±1.6 mm) for all mesh sizes 1¼ in. (31.75 mm) and smaller.

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 A817, 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 4. Custom order fabric is available in heights to and including 20 ft. (6.10 m). The height of fabric shall be the overall dimension from ends of twists or knuckles. Permissible variation from the specified height shall be ±1 in. (±25 mm) for standard selvage on fabric with mesh sizes 1 in. (25.4 mm) and over ±½ in. (±13 mm) for all fabric with mesh sizes less than 1 in. (25.4 mm).

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. (**Warning—**Twisted selvages for fence fabric under 72 in. (1830 mm) in height are not recommended because of consumer safety considerations.)

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

11. Weight of Zinc Coating

11.1 The weight of zinc coating on the fabric may be ordered in two coating weight classes as follows:

TABLE 1 Typical Diamond Count[A]

NOTE 1—Other diamond counts are permitted (see 6.2).

NOTE 2— For fabric heights over 144 in., see 6.2.

NOTE 3—Variations to knuckled or twisted selvage may affect diamond count (see 6.2).

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	41½
0.148	2	10½	12½	13½	17½	20½	24½	27½	31½	34½	41½
0.148	1¾	11½	13½	15½	19½	23½	27½	31½	35½	39½	47½
0.148	1¼	17	21	23	29	35	41	46	52	58	70
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	11½	13½	15½	19½	23½	27½	31½	35½	39½	47½
0.120	1¼	17	21	23	29	35	41	46	52	58	70
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 metric equivalents and Fig. 1 for mesh sizes less than 1 in. (25.4 mm).