



Designation: A116 – 22

Standard Specification for Metallic-Coated, Steel-Woven Wire Fence Fabric¹

This standard is issued under the fixed designation A116; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This specification covers metallic-coated steel fence fabric having a series of horizontal (line) wires, with vertical (stay) wires either wrapped around the line wire (hinge joint) or fixed with another separate wire to the line wire (continuous stay fixed knot joint), forming rectangular openings. The fence fabric is suitable for use in fences for farm field enclosure (to keep domestic animals in or out), for wildlife and exotic animal control, for highway or railroad right-of-way fencing (to control access), and other similar uses.

1.2 This specification covers fence fabric in various designs, tensile strength grades, and metallic coating types and grades.

1.3 *Units*—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.

1.4 The text of this specification references notes and footnotes which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the specification.

1.5 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *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.*

¹ This specification is under the jurisdiction of ASTM Committee A05 on Metallic-Coated Iron and Steel Products and is the direct responsibility of Subcommittee A05.12 on Wire Specifications.

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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
A428/A428M Test Method for Weight [Mass] of Coating on Aluminum-Coated Iron or Steel Articles
A510 Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel (Metric) A0510_A0510M
A641/A641M Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
A700 Guide for Packaging, Marking, and Loading Methods for Steel Products for Shipment
A809 Specification for Aluminum-Coated (Aluminized) Carbon Steel Wire
A856/A856M Specification for Zinc-5 % Aluminum-Mischmetal Alloy-Coated Carbon Steel Wire
A902 Terminology Relating to Metallic Coated Steel Products

2.2 U.S. Federal Standard:³

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

2.3 U.S. Military Standards:³

MIL-STD-129 Marking for Shipment and Storage
MIL-STD-163 Steel Mill Products, Preparation for Shipments and Storage

3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to Terminology A902.

3.2 Definitions of Terms Specific to This Standard:

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://dodssp.daps.dla.mil>.

3.2.1 *continuous stay fixed knot joint, n*—horizontal line wire and vertical stay wire joint made by fastening continuous stay wires to line wires by tying them together with a separate wire forming a knot at each joint.

3.2.2 *fixed knot style 1, n*—knot that is formed into a general shape of a “T” as shown in Fig. 1; this knot style typically has 2 points of contact on the stay wire and 2 points of contact on the line wire.

3.2.3 *fixed knot style 2, n*—knot that is formed into a general shape of an “S” as shown in Fig. 2; this knot style typically has 2 points of contact on the stay wire and 1 point of contact on the line wire.

3.2.4 *hinge joint, n*—horizontal line wire and vertical stay wire joint made by wrapping stay wire around line wires.

3.2.5 *intermediate wires, n*—line wires other than top and bottom wires.

3.2.6 *top and bottom wires, n*—line wires at the edge of the fence fabric (the top and bottom edges as erected).

4. Ordering Information

4.1 Orders for material under this specification shall include the following information, as necessary to describe each product ordered.

4.1.1 Name of material and joint style as either woven steel fence fabric with hinge joint (3.2.4) or continuous stay fixed knot joint with specified knot style (3.2.1, 3.2.2, 3.2.3);

4.1.2 Quantity (number of rolls);

4.1.3 *Design Number*—Number describing standard sizes and construction of the fabric as listed in Table 1; or design number agreed between manufacturer and customer (6.1).

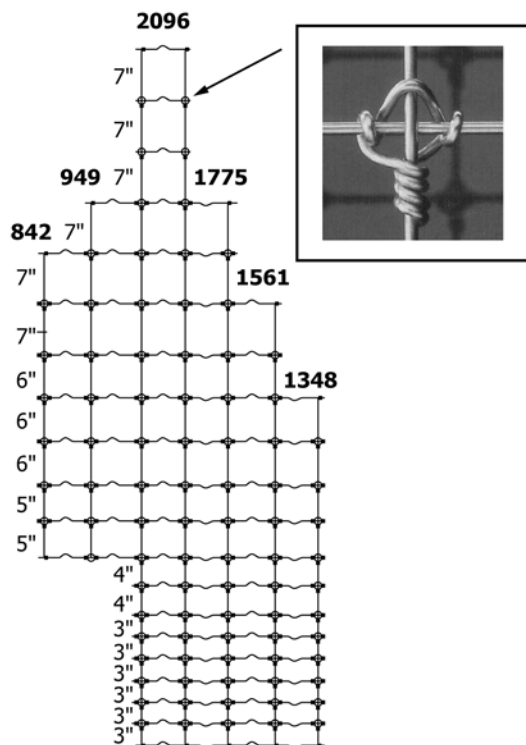


FIG. 1 Typical Knot Style 1 Continuous Stay Fixed Knot Joint Fence Fabric Dimensions for Design Numbers

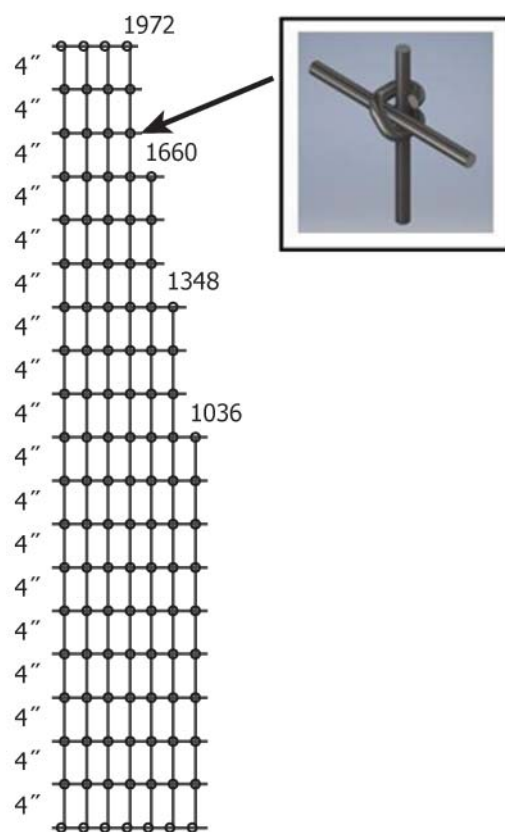


FIG. 2 Typical Knot Style 2 Continuous Stay Fixed Knot Joint Fence Fabric Dimensions for Design Numbers

NOTE 1—The design numbers are related to the characteristics of the construction of the fence fabric. The design number indicates the number of line wires, approximate height, stay wire spacing, and size (gauge) of the line and stay wires.

4.1.4 *Fabric Length*—When length is not specified by the order, fabric is furnished to the standard length of 330 ft (101 m);

4.1.5 *Tensile Strength Grade*—The fabric is available in strength grades of 60, 125, and 175 (see Table 1);

4.1.6 *Metallic Coating Type*;

4.1.6.1 *Coating Type A*—Made from aluminum coated wire.

4.1.6.2 *Coating Type Z*—Made from zinc coated wire.

4.1.6.3 *Coating Type ZA*—Made from Zn-5 % Al-miscmetal alloy (Zn-5Al-MM) coated wire.

4.1.7 *Metallic Coating Class* (see Table 2);

4.1.8 *ASTM designation and year of issue*, and

4.1.9 *Certification*, or test report, or both, if required (see Section 10).

NOTE 2—A typical ordering description is as follows: Woven-steel fence fabric, hinge joint, 60 rolls, Design Number 1047-6-12 ½, roll length 330 ft, Grade 60, Coating Type Z, Coating Class 3, to ASTM A116—, with certification.

4.2 All rolls of fence fabric accepted by the purchaser shall be billed on the basis of the original length of the rolls before sampling unless changed by contractual agreement.

5. Material

5.1 *Wire*—The steel wire shall be coated prior to fabrication, to the coating class specified in the order, the coating weight