



Designation: A 497 – 99

Standard Specification for Steel Welded Wire Fabric, Deformed, for Concrete Reinforcement¹

This standard is issued under the fixed designation A 497; 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 Department of Defense.

1. Scope

1.1 This specification covers welded wire fabric made from cold-worked drawn or rolled deformed wire, or a combination of deformed and non-deformed wires, to be used for the reinforcement of concrete.

1.2 The values stated in either inch-pound or SI units are to be regarded as the standard. Within the text the inch-pound units are shown in parenthesis. The values stated in each system are not exact equivalents; therefore, each system must be used independently of the other. Combining values may result in nonconformance with the specification.

2. Referenced Documents

2.1 ASTM Standards:

A 82 Specification for Steel Wire, Plain, for Concrete Reinforcement²

A 496 Specification for Steel Wire, Deformed, for Concrete Reinforcement²

A 700 Practices for Packaging, Marking, and Loading Methods for Steel Products for Domestic Shipment³

2.2 Military Standards:

MIL-STD-129 Marking for Shipment and Storage⁴

MIL-STD-163 Steel Mill Products Preparation for Shipment and Storage⁴

2.3 Federal Standard:

Fed. Std. No. 123 Marking for Shipments (Civil Agencies)⁴

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *convoluted wire, n*—when wire for welded fabric is shaped into a sinusoidal wave shape, it is commonly referred to as convoluted wire. The wire is used in the manufacture of cages for certain applications of concrete pipe reinforcing. Only non-deformed wire is normally subject to convolution.

3.1.2 *welded wire fabric, n*—as used within the scope and intent of this specification, welded wire fabric designates a material composed of cold-worked steel wire, fabricated into sheets or rolls by the process of electric resistance welding. The finished material shall consist essentially of a series of longitudinal and transverse wires arranged substantially at right angles to each other, and welded together at points of intersection.

4. Ordering Information

4.1 Orders for material to this specification should include the following information:

4.1.1 Quantity (weight or square area),

4.1.2 Name of material (deformed welded wire fabric for concrete reinforcement),

4.1.3 Wire spacings and sizes,

4.1.4 Minimum yield strength if Supplement S1 of Specification A 496 applies; and minimum yield strength if wire conforming to Specification A 82 is to be used and Supplement S1 of Specification A 82 applies.

4.1.5 Exclusion of over-steeling, if required (see 9.4.1),

4.1.6 Length and width of sheets or rolls,

4.1.7 Packaging (see Section 16), and

4.1.8 ASTM designation and year of issue.

NOTE 1—A typical ordering description is as follows: 10 000 ft² welded deformed wire fabric for concrete reinforcement, 6 × 12–D6 × D2, in flat sheets 96 in. wide by 240 in. long, in secured lifts, to ASTM A 497 – ____.

5. Materials

5.1 The wire used in the manufacture of welded wire fabrics shall conform to Specification A 496 and its Supplement S1 if so ordered, either solely or in combination with wire conforming to Specification A 82 and its Supplement S1 if so ordered.

5.2 Welded wire fabric shall be furnished either in flat sheets, or in rolls, as specified by the purchaser.

6. Manufacture

6.1 The wires shall be assembled by automatic machines or by other suitable mechanical means which will assure accurate spacing and alignment of all members of the finished fabric.

6.2 Longitudinal and transverse members shall be securely

¹ This specification is under the jurisdiction of ASTM Committee A-1 on Steel, Stainless Steel, and Related Alloys and is the direct responsibility of Subcommittee A01.05 on Steel Reinforcement.

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² *Annual Book of ASTM Standards*, Vol 01.04.

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

⁴ Available from Standardization Documents Order Desk, Building 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094.