



Designation: A 184/A 184M – 05

Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement¹

This standard is issued under the fixed designation A 184/A 184M; 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 material in mat (or sheet) form fabricated from deformed steel bars to be used for the reinforcement of concrete. Mats consist of two layers of bars that are assembled at right angles to each other. Mats are assembled by welding at the intersections.

1.2 This specification is applicable for orders in either inch-pound units (as Specification A 184) or SI units (as Specification A 184M).

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

2. Referenced Documents

2.1 ASTM Standards:²

A 615/A 615M Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement

A 706/A 706M Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement

2.2 U.S. Military Standards:³

MIL-STD-129 Marking for Shipment and Storage

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

2.3 U.S. Federal Standard:³

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

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

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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.

3. Ordering Information

3.1 It shall be the responsibility of the purchaser to specify all requirements that are necessary for material ordered to this specification. Such requirements shall include, but are not limited to, the following:

3.1.1 Quantity,

3.1.2 Size and spacing of members in each direction,

3.1.3 Grade required (Grade 40 or 60) [280 or 420],

3.1.4 Type of steel as appropriate (see Section 4),

3.1.5 ASTM designation A 184/A 184M and year of issue.

NOTE 1—A typical ordering description is as follows: 1000 bar mats to ASTM A 184– ; fabricated from Grade 40 bars to ASTM A 615– ; 6 by 6 in.; No. 4 by 120 in. longitudinal tip to tip, outer bars spaced 54 in.; No. 3 by 60 in. transverse, outer bars spaced 114 in.

[1000 bar mats to ASTM A 184M– ; fabricated from Grade 280 bars to ASTM A 615M– ; 150 by 150 mm; No. 10 by 3000 mm longitudinal tip to tip, outer bars spaced 1350 mm; No. 10 by 1500 mm transverse, outer bars spaced 2850 mm.]

4. Material and Manufacture

4.1 Deformed steel bars of Grades 40 [280] used in the manufacture of welded mats shall conform to Specification A 615 [A 615M]. Deformed steel bars of Grade 60 [420] used in the manufacture of welded mats shall conform to Specification A 615 [A 615M] or A 706 [A 706M].

5. Fabrication

5.1 Fabricated mats shall be composed of two layers of bars substantially parallel and perpendicular to each other.

5.1.1 Mats shall be assembled by means of welding to provide attachment at intersections.

5.1.1.1 Welds shall provide attachment at all exterior intersections and at not less than alternate interior intersections.

5.1.1.2 The separation of 5 % or less of all welded intersections of any mat shall not be cause for rejection provided that no more than half of the welds on any one bar are separated.

5.1.1.3 Welding shall be performed in such a manner that the strength and ductility requirements of the material specifications in Section 4 are met when a specimen is tested across a point of weld.

*A Summary of Changes section appears at the end of this standard.