



Designation: A704/A704M – 06 (Reapproved 2011)

# Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement<sup>1</sup>

This standard is issued under the fixed designation A704/A704M; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification covers material in mat (or sheet) form fabricated from hot-rolled, plain steel bars or rods to be used for the reinforcement of concrete. Mats consist of two layers of bars or rods which are assembled by welding at right angles to each other.

1.2 This specification is applicable for orders in either inch-pound units (as A704) or in SI units [as A704M].

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*:<sup>2</sup>

[A185/A185M Specification for Steel Welded Wire Reinforcement, Plain, for Concrete \(Withdrawn 2013\)](#)<sup>3</sup>

[A615/A615M Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement](#)

[A497/A497M Specification for Steel Welded Wire Reinforcement, Deformed, for Concrete \(Withdrawn 2013\)](#)<sup>3</sup>

[A700 Practices for Packaging, Marking, and Loading Methods for Steel Products for Shipment](#)

[A706/A706M Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement](#)

<sup>1</sup> 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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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> The last approved version of this historical standard is referenced on [www.astm.org](http://www.astm.org).

2.2 *U.S. Military Standard*:<sup>4</sup>

[MIL-STD-29 Marking for Shipment and Storage](#)

2.3 *U.S. Federal Standard*:<sup>4</sup>

[Fed. Std. No. 123 Marking for Shipment \(Civil Agencies\)](#)

## 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, no. of mats or area, or both;

3.1.2 Size and spacing of steel bars or rods in each direction;

3.1.3 Plain bar or rod;

3.1.4 Grade required (Grade 40 or 60 [280 or 420] as appropriate);

3.1.5 Type of steel, as appropriate (see Section 4); and

3.1.6 ASTM designation and year of issue.

NOTE 1—A typical ordering description is as follows: 1000 welded bar mats; Grade 40; to ASTM A704 – \_\_\_\_\_, 6 by 12 in.; ½ in. diameter by 120 in. longitudinal tip to tip, outer bars spaced 54 in.; ½ in. diameter by 60 in. transverse, outer bars spaced 108 in. [1000 welded bar mats; Grade 280; to ASTM A704M – \_\_\_\_\_, 150 by 300 mm; 12 mm diameter by 3000 mm longitudinal tip-to-tip, outer bars spaced 1350 mm; 12 mm diameter by 1500 mm transverse, outer bars spaced 2750 mm].

## 4. Materials

4.1 Plain bars or rods of Grades 40 and 60 [280 and 420] used in the manufacture of mats shall conform to Specification [A615/A615M](#) or Specification [A706/A706M](#).

4.2 Maximum size of bar and rod material shall be ¾ in. [19 mm] nominal diameter. Minimum size of rod material shall be 7/32 in. [6 mm] nominal diameter.

## 5. Fabrication

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

<sup>4</sup> Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS. Or visit: <http://assist.daps.dla.mil/online>.