Standard Specification for

Steel Wire, Deformed, for Concrete Reinforcement

AASHTO Designation: M 225M/M 225-09 (2013)
ASTM Designation: A496/A496M-07

AASHTO

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1. SCOPE

1.1. This specification covers deformed steel wire that has been cold worked by drawing, rolling, or both drawing and rolling to be used as produced, or in fabricated form, for the reinforcement of concrete in sizes having nominal cross-sectional areas not less than 6.45 mm^2 [0.01 $in.^2$].

1.2. Supplement S1 describes high-strength wire, which shall be furnished when specifically ordered. It shall be permissible to furnish high-strength wire in place of regular wire if mutually agreed to by the purchaser and manufacturer.

1.3. The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in nonconformance with the standard. The inch-pound units are shown in brackets except in Table 1.

2. REFERENCED DOCUMENTS

2.1. *AASHTO Standards*:

- M 221M/M 221, Steel Welded Wire Reinforcement, Deformed, for Concrete
- T 244, Mechanical Testing of Steel Products

2.2. *ASTM Standards*:

- A700-05, Standard Practices for Packaging, Marking, and Loading Methods for Steel Products for Shipment (withdrawn 2014)
- E83, Standard Practice for Verification and Classification of Extensometer Systems

2.3. *Military Standard*:

- MIL-STD-129, Marking for Shipment and Storage

2.4. *Federal Standard*:

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

2.5. *ACI Standard*:

- ACI 318, Building Code Requirements for Structural Concrete

3. TERMINOLOGY

3.1. *Description of Terms Specific to This Standard*:

3.1.1. *deformed steel wire for reinforcement*—as used within the scope and intent of this specification, shall mean any cold-worked, deformed steel wire intended for use as reinforcement in concrete construction, the wire surface having deformations that (1) inhibit longitudinal movement of the wire in such construction and (2) conform to the provisions of Section 5. It shall be permissible for the deformations to be raised or indented.

3.1.2. *size number*—as used in this specification, refers to the numerical designation of the wire as tabulated in Table 1 and Table 2 under the column headed "Deformed Wire Size Number," or a number indicating the nominal cross-sectional area of the deformed wire in square millimeters [hundredths of a square inch].

4. ORDERING INFORMATION

4.1. When deformed wire is ordered by size number, the dimensional requirements shall be as given in Table 1. When deformed wire is ordered to dimensions other than the sizes shown, the nominal dimensions shall be developed from the applicable unit mass per meter of the section.

4.2. It shall be the responsibility of the purchaser to specify all requirements that are necessary for the manufacture and delivery of the wire under this specification. Such requirements to be considered include, but are not limited to, the following:

4.2.1. Quantity (mass) [weight],

4.2.2. Name of material (deformed steel wire for concrete reinforcement),

4.2.3. Wire diameter (see Table 1 and Table 2),

4.2.4. Yield strength measurement (see Sections 8 and 13.3),

4.2.5. Packaging (see Section 17),

4.2.6. AASHTO designation and year of issue, and

4.2.7. Special requirements if any (see Supplement S1).

Note 1—A typical ordering description is as follows: 25 000 kg deformed steel wire for concrete reinforcement, size No. D-12, on pipe carriers, polyethylene shrouded, to M 225M-____. [50,000 lb] deformed steel wire for concrete reinforcement, size No. D-12 [MD80], in 800-kg [2000-lb] secured coils to M 225-____.