
Standard Specification for Steel Wire and Welded Wire, Plain and Deformed, for Concrete Reinforcement

AASHTO Designation: MP 30M/MP 30-17¹

Technical Section: 4f, Metals

Release: Group 2 (June 2017)

ASTM Designation: A1064/A1064M-15



**American Association of State Highway and Transportation Officials
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1. SCOPE

- 1.1. This specification covers carbon-steel wire and welded wire reinforcement produced from hot-rolled rod to be used for the reinforcement of concrete. The steel wire is cold-worked, drawn or rolled, plain (non-deformed, as-drawn, or galvanized), or deformed. Welded wire reinforcement is made from plain or deformed wire, or a combination of plain and deformed wire. Common wire sizes are given in Tables 9, 10, 11, and 12; actual wire sizes are not restricted to those shown in the tables.

Note 1—Welded wire for concrete reinforcement has been described by various terms: welded wire fabric (WWF), fabric, and mesh. The wire reinforcement industry prefers the term “welded wire reinforcement” (WWR) as being more representative of the range of products being manufactured. Therefore, the term “welded wire fabric” has been replaced with the term “welded wire reinforcement” in this specification and in related specifications.

- 1.2. This specification is applicable for orders in either SI units (MP 30M) or in inch-pound units (MP 30). The values stated in either SI units or inch-pound units are to be regarded separately as standard. Within the text the inch-pound units are shown in brackets (except in Table 9 and Table 11). SI units and inch-pound units are not necessarily equivalent; therefore, each system shall be used independently of the other. Combining values from the two systems may result in nonconformance with the standard.

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standard:*
- T 244, Mechanical Testing of Steel Products
- 2.2. *ASTM Standards:*
- A 641/A 641M, Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
 - E 83, 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)

3. TERMINOLOGY

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

- 3.1.1. *convoluted wire*—when wire for welded wire reinforcement 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 plain wire is normally subject to convolution.
- 3.1.2. *deformed steel wire for reinforcement*—as used within the scope and intent of this specification, shall mean any cold-worked or rolled, 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.
- 3.1.3. *plain steel wire for reinforcement*—as used within the scope and intent of this specification, shall mean any cold-drawn or rolled, steel wire intended for use as reinforcement in concrete construction, the wire being smooth without deformations.
- 3.1.4. *size number*—as used in this specification, refers to the numerical designation of the wire as tabulated in Tables 9, 10, 11, and 12.
- 3.1.5. *welded wire reinforcement*—as used within the scope and intent of this specification, welded wire reinforcement 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. 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:
 - 4.1.1. Quantity (mass) [weight] or square area for welded wire reinforcement;
 - 4.1.2. Name of material (cold-drawn or rolled steel wire or welded wire reinforcement, plain or deformed, for concrete reinforcement);
 - 4.1.3. Wire size number (see Tables 9, 10, 11, and 12). When wire is ordered in sizes other than the common sizes shown, the nominal dimensions shall be developed from the applicable unit mass per meter of the section;
 - 4.1.4. Wire spacing, and sheet or roll width and length for welded wire reinforcement;
 - 4.1.5. Minimum yield strength or grade;
 - 4.1.6. Yield strength measurement (see Sections 6.1.1, 6.2.1, and 11.3);
 - 4.1.7. Exclusion of oversteeling, if required (see Section 6.4.5.4.2);
 - 4.1.8. Packaging (see Section 14);
 - 4.1.9. Request for outside inspection (if not requested, Section 13.1 applies);