



Standard Specification for Steel Wire for Masonry Joint Reinforcement¹

This standard is issued under the fixed designation A951/A951M; 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.

1. Scope*

1.1 This specification covers masonry joint reinforcement fabricated from cold-drawn steel wire. Joint reinforcement consists of longitudinal wires welded to cross wires.

1.2 The values stated in either inch-pound units or SI units are to be regarded separately as standard. Within the text, the SI units are shown in brackets. 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 non-conformance with the standard.

2. Referenced Documents

2.1 *ASTM Standards*:²

A152 Specification for Wrought Iron Rivets and Rivet Rounds (Withdrawn 1972)³

A580/A580M Specification for Stainless Steel Wire

A641/A641M Specification for Zinc-Coated (Galvanized) Carbon Steel Wire

A1064/A1064M Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete

3. Ordering Information

3.1 Orders for wire reinforcement under this Specification shall contain the following information:

- 3.1.1 Quantity (linear feet [metres]),
- 3.1.2 Type (truss, ladder),
- 3.1.3 Width (nominal thickness of masonry wall),
- 3.1.4 Wire size and wire specification,
- 3.1.5 Finish (see Section 6),
- 3.1.6 Requirements for inspection (see Section 9),

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 The last approved version of this historical standard is referenced on www.astm.org.

- 3.1.7 Packaging (see Section 12), and
- 3.1.8 ASTM designation number and year of issue.

4. Materials and Manufacture

4.1 Wire used in the manufacture of masonry joint reinforcement shall be round and shaped and conform to the applicable provisions of Specifications A580/A580M, Type 304, or A1064/A1064M except as modified herein.

4.2 Masonry joint reinforcement shall be assembled by automatic machines or by other suitable mechanical means that will assure accurate spacing and alignment of all members of the finished product.

4.3 Longitudinal and cross wires shall be securely connected at every intersection by an electric-resistance welding process that includes both fusion welding together with applied pressure to join the materials.

4.4 Longitudinal wires shall be deformed. One set of two deformations shall occur around the perimeter of the wire at a maximum spacing of 0.7 times the diameter or width of the wire, but not less than eight sets per 1 in. [25 mm] of length.

NOTE 1—Wire used for joint reinforcement is knurled to form deformations and as such it does not come under the deformation requirements in Specification A1064/A1064M.

5. Mechanical Requirements

5.1 *Tensile Properties*—Wire used in the fabrication of masonry joint reinforcement shall conform to the requirements of Table 1 based on nominal area of the wire.

5.2 *Tension Tests*:

5.2.1 Tension tests shall be made on individual wires cut from the finished product and tested either across or between the welds. No less than 50 % shall be across welds.

5.2.2 Tension tests across a weld shall have the welded joint located approximately at the center of the wire being tested.

5.2.3 Tensile strength shall be the average of four test values determined by dividing the maximum test load by the specified nominal cross-sectional area of the wire.

5.3 *Reduction of Area*—The ruptured section of the tensile specimen is measured to determine this property. The measurement shall be made only when rupture has occurred at a sufficient distance from the center of the weld to permit an accurate measurement of the fractured section. Additional

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