



Standard Specification for Filled Epoxy-Coated Seven-Wire Prestressing Steel Strand¹

This standard is issued under the fixed designation A882/A882M; 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 ASTM Specification **A416/A416M** low-relaxation Grade 250 and Grade 270 seven-wire prestressing steel strand with protective fusion-bonded epoxy coating applied by the electrostatic deposition method or other method that will meet the coating requirements in Section 8, and, except as allowed by 1.2, with the interstices of the seven wires filled with epoxy to minimize migration of corrosive media, either by capillary action or other hydrostatic forces.

NOTE 1—The manufacturer as identified throughout this specification is the coating applicator.

1.2 Upon special request by the purchaser, the interstices are left unfilled.

NOTE 2—Unfilled strand can corrode from the inside and its application for prestressing tendons in concrete or for rock and soil anchors is not recommended.

1.3 This specification is applicable for orders in either inch-pound units (as Specification A882) or SI units [as Specification A882M].

1.4 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 non-conformance with the standard.

2. Referenced Documents

2.1 ASTM Standards:²

A370 Test Methods and Definitions for Mechanical Testing of Steel Products

A416/A416M Specification for Steel Strand, Uncoated Seven-Wire for Prestressed Concrete

B117 Practice for Operating Salt Spray (Fog) Apparatus

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.

D968 Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive

G12 Test Method for Nondestructive Measurement of Film Thickness of Pipeline Coatings on Steel (Withdrawn 2013)³

G14 Test Method for Impact Resistance of Pipeline Coatings (Falling Weight Test)

G20 Test Method for Chemical Resistance of Pipeline Coatings

2.2 *Federal Highway Administration Report:*

FHWA-RD-74-18 Nonmetallic Coatings for Concrete Reinforcing Bars (February 1974)⁴

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *disbonding*—loss of adhesion between the fusion-bonded epoxy coating and the steel strand wires.

3.1.2 *fusion-bonded epoxy coating*—a product containing pigments, thermo-setting epoxy resins, cross-linking agents, and other substances, which is applied in the form of powder onto a clean, heated metallic substrate and fuses to form a continuous barrier coating.

3.1.3 *grit*—inert particles impregnated on the outer surface of the epoxy coating for improving bond with cement grout.

3.1.4 *holiday*—a discontinuity in the coating that is not discernible to a person with normal or corrected vision.

3.1.5 *patching material*—a liquid coating used to repair damaged or uncoated areas.

4. Ordering Information

4.1 The purchaser should specify:

4.1.1 Diameter, grade, and type of uncoated strand in accordance with Specification **A416/A416M** (latest edition).

4.1.2 Smooth or grit impregnated coating (see 7.3).

4.1.3 Quantity (in feet [metres]).

4.1.4 Requirements for certification (see A1.2.3).

4.1.5 Requirements for material samples (see 5.3).

4.1.6 Requirements for patching material (see 5.4).

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from National Technical Information Service (NTIS), 5285 Port Royal Rd., Springfield, VA 22161, <http://www.ntis.gov>.