



Designation: A 641/A 641M – 98

Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire¹

This standard is issued under the fixed designation A 641/A 641M; 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.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers soft, medium, and hard temper zinc-coated (galvanized) carbon steel wire in coils for general use.

1.2 The supplementary requirements of this specification cover zinc-coated weights [masses] for nails, staples, and wire from which nails and staples are cut and formed.

1.3 This specification is applicable to orders in either inch-pound units (as A 641) or SI units (as A 641M). Values stated in either inch-pound units or SI units are to be regarded separately as the standard. Within the text, the SI units are shown in brackets. The values stated in the two systems are not exact equivalents; therefore, each system shall be used independent of the other, without combining values in any way.

1.4 This specification and some referenced specifications are expressed in both inch-pound and SI units. If the order specifies the applicable “M” specification designation, the product shall be furnished to SI units.

1.5 The text of this specification references notes and footnotes which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the specification.

2. Referenced Documents

2.1 ASTM Standards:

A 90/A 90M Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings²

A 700 Practices for Packaging, Marking, and Loading Methods for Steel Products for Domestic Shipments³

A 902 Terminology Relating to Metallic Coated Products²

B 6 Specification for Zinc (Slab Zinc)⁴

¹ This specification is under the jurisdiction of ASTM Committee A-5 on Metallic-Coated Iron and Steel Products and is the direct responsibility of Subcommittee A05.12 on Wire Specifications.

Current edition approved April 10, 1998. Published November 1998. Originally published as A 641–92. Last previous edition A 641/A 641M–97.

² Annual Book of ASTM Standards, Vol 01.06.

³ Annual Book of ASTM Standards, Vol 01.05.

⁴ Annual Book of ASTM Standards, Vol 02.04.

E 8 Test Methods of Tension Testing of Metallic Materials⁵

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications⁶

3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to Terminology A 902.

4. Classification

4.1 *Temper*—The wire is classified with regard to mechanical properties by temper, which is related to tensile strength and stiffness. The temper designations are soft, medium, and hard.

4.2 *Zinc Coating*—Zinc coating on the wire is classified in a number of classes (Class 1, 2, 3, or A, 4, B, 5, C (see Table 1, Table 2, Table 3, and Table S1.1)) and as “regular coating.”

NOTE 1—Class 2 coating has been eliminated since it is no longer generally specified by users except for nails, staples, and wire from which nails and staples are cut and formed, as presented in the Supplementary Requirements.

5. Ordering Information

5.1 Orders for material under this specification shall include the following information:

5.1.1 Quantity (weight [mass]),

5.1.2 Coated wire diameter,

5.1.3 Intended use, when the wire is to be used for nails or staples (see Supplementary Requirement S1),

5.1.4 Class of coating (see Table 1, Table 2, or Table 3 (or Table S1.1 when applicable)),

5.1.5 Temper (soft, medium, or hard) (Table 4 or Table 5),

5.1.6 ASTM designation and year of issue as A 641—____ for inch-pound units, or A 641M—____ for SI units.

5.1.7 Supplementary Requirements (if required).

NOTE 2—A typical ordering description (inch-pound units) is as follows: 50 000 lb, 0.120 in., zinc-coated wire, Class 1 coating, soft temper in 1500-lb coils on tubular carriers to ASTM A 641—____.

⁵ Annual Book of ASTM Standards, Vol 03.01.

⁶ Annual Book of ASTM Standards, Vol 14.02.