Designation: A854/A854M – 08 (Reapproved 2022)

Standard Specification for Metallic-Coated Steel Smooth High-Tensile Fence and Trellis Wire[1]

This standard is issued under the fixed designation A854/A854M; 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 12 ½-gage (0.099-in.) [2.5-mm] Class 3 metallic-coated steel wire suitable for use in parallel–wire fence, trellis, and similar structures that are typically nonelectrified. Two types of coatings are covered, as follows:

1.1.1 *Type I*—Zinc-coated (galvanized), and

1.1.2 *Type II*—Zinc-5 % aluminum mischmetal (Zn-5Al-MM) alloy coated.

1.2 This specification is applicable to orders in either inch-pound units (as A854) or acceptable SI units (as A854M). Inch-pound units and SI units are not necessarily equivalent.

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A90/A90M Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings

A370 Test Methods and Definitions for Mechanical Testing of Steel Products

A700 Guide for Packaging, Marking, and Loading Methods for Steel Products for Shipment

B6 Specification for Zinc

B750 Specification for GALFAN (Zinc-5 % Aluminum-Mischmetal) Alloy in Ingot Form for Hot-Dip Coatings

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E47 Test Methods for Chemical Analysis of Zinc Die-Casting Alloys (Withdrawn 1997)[3]

E1277 Test Method for Analysis of Zinc-5 % Aluminum-Mischmetal Alloys by ICP Emission Spectrometry

2.2 *Military Standards:*[4]

MIL-STD-129 Marking for Shipment and Storage

2.3 *Federal Standard:*[5]

Fed. Std. No. 123 Marking for Shipment (Civil Agencies)

2.4 *International Lead Zinc Research Organization Standard:*[6]

Gf-1 Standard Practice for Determination of Cerium and Lanthanum Compositions in Galfan Alloy (5 % Al-0.04 % La-0.04 % Ca-Bal/SHG Zn) Class 3 Coating

3. Classification

3.1 The wire is furnished in Class 3 coating.

3.2 The wire is furnished in three grades according to tensile strength, as follows:

3.2.1 *Grade 200*—Minimum tensile strength, 200 ksi [1380 MPa].

3.2.2 *Grade 180*—Minimum tensile strength, 180 ksi [1240 MPa].

3.2.3 *Grade 140*—Minimum tensile strength, 140 ksi [970 MPa].

4. Ordering Information

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

4.1.1 Quantity (number of coils or weight).

4.1.2 Name of material (high-tensile fence wire).

4.1.3 Coated wire diameter (Section 8).

4.1.4 Type of Coating (1.1.1 or 1.1.2),

4.1.5 Class of coating (3.1).

4.1.6 Grade or tensile strength (3.2).

4.1.7 Nominal weight or length of coils and tolerance.

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

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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.

[4] Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

[5] Available from U.S. Government Printing Office, Washington, DC, 20402.

[6] Available from International Lead Zinc Research Organization, P.O. Box 12036, Research Triangle Park, NC 27709.