



Designation: A 856/A 856M – 98

Standard Specification for Zinc-5 % Aluminum-Mischmetal Alloy-Coated Carbon Steel Wire¹

This standard is issued under the fixed designation A 856/A 856M; 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 soft, medium, and hard temper zinc-5 % aluminum-mischmetal (Zn-5 Al-MM) alloy-coated carbon steel wire in coils for general use. The product is intended for applications requiring corrosion resistance, drawability, and formability.

1.2 This specification is applicable to orders in either inch-pound units (as A 856) or acceptable SI units [as A 856M]. Inch-pound units and SI units are not necessarily equivalent; therefore, each system shall be used independently of the other, without combining values in any way.

1.3 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 this 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-Alloy Coatings²
- A 700 Practices for Packaging, Marking, and Loading Methods for Steel Products for Domestic Shipment³
- A 902 Terminology Relating to Metallic Coated Steel Products²
- B 117 Test Method of Salt Spray (Fog) Testing²
- B 750 Specification of Zinc-5 % Aluminum-Mischmetal Alloy (UNS Z38510) in Ingot Form for Hot-Dip Coatings⁴
- E 8 Test Methods of Tension Testing of Metallic Materials⁵
- E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specification⁶
- E 47 Test Methods for Chemical Analysis of Zinc Die-Casting Alloys⁷

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 856/A 856M – 86. Last previous edition A 856/A 856M – 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.

⁵ *Annual Book of ASTM Standards*, Vol 03.01.

⁶ *Annual Book of ASTM Standards*, Vol 14.02.

⁷ *Annual Book of ASTM Standards*, Vol 03.05.

E 1277 Test Method for Chemical Analysis of Zinc-5 % Aluminum-Mischmetal Alloy by the ICP Argon Plasma Spectrometric Method⁸

2.2 Military Standards:

MIL-STD-129 Marking for Shipment and Storage⁹

MIL-STD-163 Steel Mill Products Preparation⁹

2.3 Federal Standards:

Fed Std. No. 123 Marking for Shipment (Civil Agencies)⁹

2.4 Other Standards:

GF-1 Standard Practice for Determination of Cerium and Lanthanum Compositions in Galfan Alloy (5–Al-0.04 % La-0.04 % Ce-Ba1 SHG Zn)¹⁰

3. Terminology

3.1 *Definitions*—See Terminology A 902 for definitions of general terminology relating to metallic coated steel products.

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 *Coating Classes*—Zn-5AL-MM alloy coating on the wire is classified in a number of classes (Class 20, Class 40, Class 60, Class 80, Class 100, and Class 120) (see Table 1).

5. Ordering Information

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

5.1.1 Quantity (weight),

5.1.2 Coated wire diameter,

5.1.3 Class of coating (see 4.2)

5.1.4 Temper (soft, medium, or hard) (see Table 2),

5.1.5 Packaging requirements, and

5.1.6 ASTM designation and year of issue, as A 856-____ for inch-pound units or A 856M-____ for SI units.

⁸ *Annual Book of ASTM Standards*, Vol 03.06.

⁹ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111–5094, Attn: NPODS

¹⁰ Available from International Lead Zinc Research Organization 2525 Meridian Parkway, P.O. Box 12036, Research Triangle Park, NC 27709-2036.