



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:²

- A 90/A 90M Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc-Alloy Coatings
- A 700 Practices for Packaging, Marking, and Loading Methods for Steel Products for Domestic Shipment
- A 902 Terminology Relating to Metallic Coated Steel Products
- B 117 Test Method of Salt Spray (Fog) Testing
- B 750 Specification of Zinc-5 % Aluminum-Mischmetal Alloy (UNS Z38510) in Ingot Form for Hot-Dip Coatings
- E 8 Test Methods of Tension Testing of Metallic Materials
- E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specification
- E 47 Test Methods for Chemical Analysis of Zinc Die-Casting Alloys
- E 1277 Test Method for Chemical Analysis of Zinc-5 % Aluminum-Mischmetal Alloy by the ICP Argon Plasma

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.

Spectrometric Method

2.2 Military Standards:³

- MIL-STD-129 Marking for Shipment and Storage
- MIL-STD-163 Steel Mill Products Preparation

2.3 Federal Standards:³

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

2.4 Other Standards:⁴

- 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)

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 (1, 3 or A, 60, B, 100, and C) (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.

NOTE 1—A typical ordering description is as follows: 50 000 lb, 0.120-in. diameter Zn-5 Al-MM alloy-coated wire, Coating Class 60, Soft Temper in 600-lb coils on tubular carriers to ASTM A 856-____ or [50 000 kg, 3.00-mm diameter Zn-5 Al-MM alloy-coated wire, Coating Class 1,

³ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111–5094, Attn: NPODS

⁴ Available from International Lead Zinc Research Organization 2525 Meridian Parkway, P.O. Box 12036, Research Triangle Park, NC 27709-2036.

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