



Designation: B 803 – 9802

Standard Specification for High-Strength Zinc–5 % Aluminum-Mischmetal Alloy-Coated Steel Core Wire for Aluminum and Aluminum-Alloy Conductors, Steel Reinforced¹

This standard is issued under the fixed designation B 803; 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 This specification is under the jurisdiction of ASTM Committee B-01 on Electrical Conductors and is the direct responsibility of Subcommittee B01.05 on Conductors of Ferrous Metals.

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1. Scope

1.1 This specification covers round, high strength, zinc–5 % aluminum-mischmetal (Zn–5Al–MM) alloy-coated, steel core wire with Class A Zn–5Al–MM alloy coating used for mechanical reinforcement in the manufacture of special aluminum and aluminum-alloy conductors, steel reinforced.

1.2 This specification covers wire of diameter from 0.0500 to 0.1900 in. inclusive.

1.3 ~~The SI values for resistivity are regarded as standard. For all other properties the stated in inch-pound units or SI units are to be regarded separately as standard. The values in each system are not exact equivalents; therefore, each system shall be used independently of the SI units other. Combining values from the two systems may be approximate, result in nonconformance with this specification.~~

2. Referenced Documents

2.1 The following documents of the issue in effect on date of material purchase form a part of this specification to the extent referenced herein.

2.2 ASTM Standards:

A 90/A90M Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings²

A 370 Test Methods and Definitions for Mechanical Testing of Steel Products³

A 751 Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products³

B 193 Test Method for Resistivity of Electrical Conductor Materials⁴

B 750 Specification for Zinc–5 % Aluminum-Mischmetal Alloy (UNS Z38510) in Ingot Form for Hot-Dip Coatings⁵

E 47 Test Methods for Chemical Analysis of Zinc Die-Casting Alloys⁶

~~E 1277 Test Method~~ 1277 Practice for Chemical Analysis of Zinc-5 Aluminum-Mischmetal Alloys by ICP Emission Spectrometry⁶

2.3 Other Standard:

GF-1 Standard Practice for Determination of Cerium and Lanthanum Compositions in Galfan Alloy (5 % Al-0.04 % La-0.04 % Ce-Bal SHG Zn)⁷

3. Terminology

3.1 Abbreviations: Abbreviations:

3.1.1 MM—mischmetal

3.1.2 Zn–5Al–MM—zinc–5 % aluminum mischmetal

3.2 Definitions:

² Annual Book of ASTM Standards, Vol 01.06.

³ Annual Book of ASTM Standards, Vol 01.03.

⁴ Annual Book of ASTM Standards, Vol 02.03.

⁵ Annual Book of ASTM Standards, Vol 02.04.

⁶ Annual Book of ASTM Standards, Vol 03.05.

⁷ Annual Book of ASTM Standards, Vol 03.06.

⁷ Available from International Lead Zinc Research Organization, 2525 Meridian Parkway, P.O. Box 12036, Research Triangle Park, NC 27709-2036