



Designation: A111 – 99a (Reapproved 2020)

# Standard Specification for Zinc-Coated (Galvanized) “Iron” Telephone and Telegraph Line Wire<sup>1</sup>

This standard is issued under the fixed designation A111; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification covers “iron” wire with Class A, Class B, and Class C zinc coatings, suitable for use in telephone, telegraph, and signal transmission.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are for information only.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *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:*<sup>2</sup>

[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](#)

[A902 Terminology Relating to Metallic Coated Steel Products](#)

[B6 Specification for Zinc](#)

[B193 Test Method for Resistivity of Electrical Conductor Materials](#)

<sup>1</sup> 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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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard’s Document Summary page on the ASTM website.

## 3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, see Terminology [A902](#).

## 4. Ordering Information

4.1 Orders for wire under this specification shall include the following:

4.1.1 Size (in decimal fractions of an inch or (millimetre)),

4.1.2 Grade,

4.1.3 Class of zinc coating (A, B, or C),

4.1.4 Mandrel test for zinc coating (as desired, mandrels Nos. 1 to 12 for Class A or as desired, mandrels Nos. 3 to 12 for Classes B and C), and

4.1.5 ASTM designation and year of issue.

NOTE 1—*Example*—A typical order including the necessary information to guide the manufacturer, is as follows:

5000 lb of 0.109-in. Grade BB wire, Class A coating, mandrel No. 3, ASTM Specification A111.

## 5. Zinc for Coating

5.1 The zinc used for the coating shall be any grade of zinc conforming to Specification [B6](#).

## 6. Base Metal

6.1 The base metal shall be made by any commercially-accepted steel-making process of such quality and purity that, when processed and zinc coated, the finished wire will have the properties prescribed in this specification for its size and grade.

## 7. Joints

7.1 The wire shall be furnished in coils of one continuous length. Welds made prior to the final wire drawing shall be permitted.

## 8. Sampling

8.1 The inspector shall select at random during the visual examination specified in Section [18](#), 1 sample coil from every 10 coils in the first 100 coils of the lot, and 1 sample coil for every additional 35 coils but not less than 3 coils from the entire lot. From each coil of galvanized wire thus selected, a sample of suitable length shall be taken for the weight of