
Standard Specification for

Aluminum-Coated Steel Barbed Wire

AASHTO Designation: M 305-02

ASTM Designation: A 585-97



1. SCOPE

- 1.1. This specification covers aluminum-coated steel barbed wire consisting of a strand of two wires, coated before fabrication, with four-point barbs of either aluminum-coated steel or aluminum alloy. A choice of two types is provided, as designated by the spacing of the barbs. (See Section 4.1.)
- 1.2. The values stated in SI units are to be regarded as the standard.

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standard:*
- T 213M/T 213, Mass [Weight] of Coating on Aluminum-Coated Iron or Steel Articles
- 2.2. *ASTM Standard:*
- A 700, Practices for Packaging, Marking, and Loading Methods for Steel Products for Domestic Shipment
 - A 902, Terminology Relating to Metallic Coated Steel Products
- 2.3. *Federal Standard:*
- Fed. Std. No. 123, Marking for Shipment Civil Agencies
- 2.4. *Military Standards:*
- MIL-STD-129, Marking for Shipment and Storage
 - MIL-STD-163, Steel Mill Products, Preparation for Shipment and Storage

3. TERMINOLOGY

- 3.1. *Definitions*—For definitions of the terms used in this specification, refer to A 902.

4. CLASSIFICATION

- 4.1. Aluminum-coated steel barbed wire is supplied in a choice of two types as follows:
- 4.1.1. *Type I (Standard)*—with barbs spaced on 127-mm (5-in.) centers.
- 4.1.2. *Type II (High Security)*—with barbs spaced on 76-mm (3-in.) centers.

5. ORDERING INFORMATION

- 5.1. Orders for barbed wire purchased under this specification shall include the following information:
- 5.1.1. Quantity (number of spools);
- 5.1.2. Length of spools (1320 ft or 1000 ft, Section 8.4);
- 5.1.3. Type of barbed wire (Type I or II, Section 4.1);
- 5.1.4. Certification if required; and
- 5.1.5. AASHTO designation and year of issue.
- 5.2. All spools of barbed wire accepted by the purchaser shall be billed on the basis of the number and original length of the spools before sampling unless changed by contractual agreement.
- Note 1**—A typical ordering description is as follows: 20 spools aluminum-coated steel barbed wire. Type II (High Security), certified, to M 305-_____.

6. MATERIALS

- 6.1. *Base Metals*—The base metal shall be steel of such quality and purity that, when drawn to the size of wire specified and coated with aluminum, the finished barbed wire shall be uniform quality and have the properties and characteristics as prescribed in this specification.
- 6.2. *Aluminum-Coated Wire*—The wire used in the manufacture of this product shall meet the requirements of this specification, and shall be capable of being fabricated into barbed wire without the aluminum coating cracking or flaking to such an extent that any of the aluminum can be removed by rubbing with the bare fingers. Loosening or detachment, during fabrication, of small particles of aluminum formed by mechanical polishing of the surface of the aluminum-coated wire shall not be considered cause for rejection.
- 6.3. *Aluminum for Coating*—The ingot or pig aluminum used for coating shall conform to the following impurity limits:
- Copper, max, 0.10 percent
 - Iron, max, 0.50 percent
- 6.4. *Materials for Barbs:*
- 6.4.1. Aluminum-coated steel wire, if used for the barbs, shall meet the requirements of Section 6.2.
- 6.4.2. Aluminum alloy wire, if used for the barbs, shall be Alloy 5000-H38, 6061-T94, or equal, as agreed to between the manufacturer and the purchaser at the time of purchase.
- 6.4.3. The choice of either aluminum-coated steel wire or aluminum alloy wire for the barbs shall be that of the manufacturer, unless otherwise specified by the purchaser.