



Standard Specification for Electric-Resistance-Welded Metallic-Coated Carbon Steel Mechanical Tubing¹

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1. Scope

1.1 This specification covers round, square, rectangular, and special shape, electric-resistance-welded mechanical tubing, either zinc-coated (galvanized) after welding or produced from aluminum-coated, zinc-coated (galvanized), zinc-iron alloy-coated (galvannealed), or 55 % aluminum-zinc alloy-coated steel sheet. Tubing for use as electrical conduit (EMT) or intermediate metallic conduit (IMC) is not covered by this specification.

1.2 This specification covers mechanical tubing with outside diameters or maximum outside dimensions ranging from ½ to 8 in. (12.7 to 203.2 mm) and wall thickness from 0.028 to 0.134 in. (0.71 to 3.40 mm).

1.3 Sizes outside the ranges listed above may be ordered provided all other requirements of the specification are met.

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

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 or Zinc-Alloy Coatings²
- A 370 Test Methods and Definitions for Mechanical Testing of Steel Products³
- A 428/A 428M Test Method for Weight of Coating on Aluminum-Coated Iron or Steel Articles²
- A 463/A 463M Specification for Steel Sheet, Aluminum-Coated by the Hot-Dip Process²
- A 653/A 653M Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process²
- A 792/A 792M Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated by the Hot-Dip Process²
- A 924/A 924M Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process²

¹ This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel, and Related Alloys and is the direct responsibility of Subcommittee A01.09 on Carbon Steel Tubular Products.

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² Annual Book of ASTM Standards, Vol 01.06.

³ Annual Book of ASTM Standards, Vol 01.03.

B 6 Specification for Zinc⁴

3. Classification

3.1 The types of tubing covered by this specification are:

Type Number	Code Letters	Description
1	AWAC	electric-resistance-welded aluminum-coated carbon steel mechanical tubing
2	AWG	electric-resistance-welded galvanized carbon steel mechanical tubing
3	AWPG	electric-resistance-welded carbon steel mechanical tubing, post-hot dipped galvanized
4	AWGA	electric-resistance-welded carbon steel mechanical tubing, zinc-iron alloy-coated (galvannealed)
5	AWGZ	electric-resistance-welded carbon steel mechanical tubing, 55 % aluminum-zinc alloy-coated

4. Ordering Information

4.1 The ordered wall thickness of the tubing shall be the total of the base metal and the metallic coating.

4.2 Orders for material under this specification shall include the following:

- 4.2.1 Quantity (feet, metres, or number of lengths),
- 4.2.2 Type, code letters, and description (Sections 1 and 3),
- 4.2.3 Applicable ASTM designation number(s),
- 4.2.4 Coating designation and type of coating,
- 4.2.5 Chemically treated or not chemically treated raw material,
- 4.2.6 Oiled or dry (Section 16),
- 4.2.7 Extra smooth coating (if required),
- 4.2.8 Customer application, including fabrication,
- 4.2.9 Flash condition (7.1),
- 4.2.10 Steel grade designation (Sections 5 and 9),
- 4.2.11 Report of chemical analysis if required (Sections 10 and 11),
- 4.2.12 Shape (round, square, rectangular, or special),
 - 4.2.12.1 Dimensions: round—any two of the following: inside diameter, outside diameter, or wall thickness; square or rectangular—outside dimension, wall thickness, and corner radii, if required. (See 12.1 and 13.1 and 13.2.)

⁴ Annual Book of ASTM Standards, Vol 02.04.