



# Standard Specification for Steel Sheet, Zinc Coated by the Electrolytic Process for Applications Requiring Designation of the Coating Mass on Each Surface<sup>1</sup>

This standard is issued under the fixed designation A 879; 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 reappraisal. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reappraisal.

## 1. Scope

1.1 This specification covers zinc coatings applied by the electrolytic process to hot-rolled and cold-rolled steel sheet. The coating has a smooth, spangle-free surface. The zinc-coated sheet covered in this specification is produced in a wide range of coating masses to provide coatings that are compatible with the anticipated service life required. The coating mass varies, from very thin coatings that are usually painted to provide good service, to relatively heavy masses that provide good corrosion resistance in the bare (unpainted) condition.

1.2 The product shall be coated on one or both surfaces with equal or differential coating masses on the two surfaces. Sheet coated with equal coating masses on each surface has similar levels of corrosion protection on each surface. Often, however, a higher level of corrosion protection is required on one surface than is required on the other. Thus one surface is specified to have a heavier coating mass than the other. Either surface, when specified to be painted will provide additional corrosion protection as compared to an unpainted surface.

1.3 This coating process has essentially no effect on the base metal mechanical properties and use is permitted on any grade of hot- or cold-rolled steel sheet. The coated sheet is available as Commercial Steel (CS), Drawing Steel (DS), Deep Drawing Steel (DDS), Extra-Deep Drawing Steel (EDDS), Structural Steel (SS), High-Strength Low-Alloy Steel (HSLAS), or High-Strength Low-Alloy Steel with Improved Formability (HSLAS-F).

1.4 The values stated in SI units are to be regarded as the standard.

## 2. Referenced Documents

### 2.1 ASTM Standards:

A 90/A90M Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings<sup>2</sup>

A 754 Test Method for Coating Thickness by X-Ray Fluorescence<sup>2</sup>

A 917 Specification for Steel Sheet, Coated by the Electrolytic Process for Applications Requiring Designation of the Coating Mass on Each Surface (General Requirements)<sup>2</sup>

B 504 Test Method for Measurement of Thickness of Metallic Coatings by the Coulometric Method<sup>3</sup>

## 3. Classification

3.1 Coating shall be designated in accordance with Specification A 917. The letter G shall be used to designate pure zinc coatings.

## 4. Ordering Information

4.1 Orders for products to this specification shall include the following information, as necessary to adequately describe the desired product:

4.1.1 Name of product (electrolytic zinc-coated steel sheet).

4.1.2 ASTM designation and year of issue.

4.1.3 Base metal type (hot rolled or cold rolled).

4.1.4 Base metal designation (Commercial Steel (CS), Drawing Steel (DS), Deep Drawing Steel (DDS), Extra Deep Drawing Steel (EDDS), Structural Steel (SS), High-Strength Low-Alloy Steel (HSLAS), or High-Strength Low-Alloy Steel with Improved Formability (HSLAS-F)).

4.1.5 Formability type, strength, grade or class, or combination, thereof, as required for structural or high-strength low-alloy steels.

4.1.6 Coating designation (see 3.1).

4.1.7 Surface treatments required (see Note 1).

NOTE 1—Steel sheet is available without surface treatment (dry) or with surface treatments designated as chemical treatment, oiled, or phosphatized. Unless otherwise specified sheet is furnished oiled.

4.1.8 Dimensions [show thickness (minimum or nominal), width, and length, if cut length].

4.1.9 Coil size (must include inside diameter, outside diameter, and maximum coil weight).

4.1.10 Application (part name and description).

<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 A05.11 on Sheet Specifications.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 01.06.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 02.05.