



Designation: A 463/A 463M – 01

## Standard Specification for Steel Sheet, Aluminum-Coated, by the Hot-Dip Process<sup>1</sup>

This standard is issued under the fixed designation A 463/A 463M; 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.

*This standard has been approved for use by agencies of the Department of Defense.*

### 1. Scope

1.1 This specification covers aluminum-coated steel sheet in coils and cut lengths available with two types of aluminum coating applied by the hot-dip process, with several coating weights [masses].

1.2 Product furnished under this specification shall conform to the applicable requirements of the latest issue of Specification A 924/A 924M, unless otherwise provided herein.

1.3 This specification is applicable to orders in either inch-pound units (as A 463) or SI units [as A 463M]. Values in inch-pound and SI units are not necessarily equivalent. Within the text, SI units are shown in brackets. Each system shall be used independently of the other.

1.4 Unless the order specifies the “M” designation (SI units), the product shall be furnished to inch-pound units.

1.5 The text of this standard references notes and footnotes which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the standard.

1.6 *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 and health practices and determine the applicability of regulatory limitations prior to use.*

### 2. Referenced Documents

#### 2.1 ASTM Standards:

A 428/A 428M Test Method for Weight Mass of Coating on Aluminum-Coated Iron or Steel Articles<sup>2</sup>

A 480/A 480M Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip<sup>3</sup>

A 902 Terminology Relating to Metallic Coated Steel Products<sup>2</sup>

A 924/A 924M Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process<sup>2</sup>

E 517 Test Method for Plastic Strain Ratio  $r$  for Sheet Metal<sup>4</sup>

E 646 Test Method for Tensile Strain-Hardening Exponents ( $n$  values) of Metallic Sheet Materials<sup>4</sup>

### 3. Terminology

3.1 *Definitions*—See Terminology A 902 for definitions of general terminology relating to metallic-coated steel products.

### 4. Classification

4.1 The steel sheet is available in several designations, as follows:

4.1.1 Commercial Steel (CS Types A, B, and C),

4.1.2 Forming Steel (FS),

4.1.3 Deep Drawing Steel (DDS),

4.1.4 Extra Deep Drawing Steel (EDDS),

4.1.5 Structural Steel (SS),

4.1.6 High Strength-Low Alloy Steel (HSLAS Type A),

4.1.7 High Strength-Low Alloy Steel (HSLAS Type B),

4.1.8 Ferritic Stainless Steel (FSS Type 409), and

4.1.9 Ferritic Stainless Steel (FSS Type 439).

4.2 Structural Steel (SS) and High Strength-Low Alloy Steels (HSLAS Types A and B) are available in several grades and classes.

4.3 The aluminum coating is available in two types with several coating weights [masses] with coating designations as shown in Table 1.

4.3.1 *Coating Type 1* is manufactured using a coating bath of aluminum-silicon alloy containing 5 to 11 % silicon to promote better adherence. It is intended principally for heat-resisting applications and also for uses where corrosion resistance and heat are involved. It is available as a coating on each of the designations of steel sheet listed in 4.1.

4.3.2 *Coating Type 2* is a commercially pure aluminum. It is intended principally for use in applications requiring corrosion resistance and is available only as a coating on Commercial Steel, Forming Steel, Structural Steel, and High Strength-Low Alloy Steel.

### 5. Ordering Information

5.1 Product under this specification shall be ordered to

<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 01.03.

<sup>4</sup> Annual Book of ASTM Standards, Vol 03.01.