



Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members¹

This standard is issued under the fixed designation A 1003/A 1003M; 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 (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers coated steel sheet used in the manufacture of cold-formed framing members, such as, but not limited to, studs, joists, purlins, girts, and track.

1.2 The steel sheet used for cold-formed framing members includes metallic-coated, painted metallic-coated, or painted nonmetallic-coated.

1.3 The values stated in either inch-pound or SI units shall be regarded separately as standard. Within the text, SI units are shown in brackets. The values stated in each system are not exact equivalents; therefore, 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 specification 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 this specification.

2. Referenced Documents

2.1 ASTM Standards:

A 463/A 463M Specification for Steel Sheet, Aluminum-Coated, by the Hot-Dip Process²

A 568/A 568M Specification for Steel Sheet, Carbon, and High-Strength Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements for³

A 653/A 653M Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process²

A 755/A 755M Specification for Steel Sheet, Metallic-Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products²

A 792/A 792M Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated by the Hot-Dip Products²

A 875/A 875M Specification for Steel Sheet, Zinc-5 % Aluminum Alloy-Coated by the Hot-Dip Process²

A 879 Specification for Steel Sheet, Zinc Coated by the Electrolytic Process for Applications Requiring Designation of the Coating Mass on Each Surface²

A 902 Terminology Relating to Metallic-Coated Steel Products²

A 924/A 924M Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process²

A 941 Terminology Relating to Steel, Stainless Steel, Related Alloys, and Ferroalloys⁴

A 1004/A 1004M Practice for Establishing Conformance to the Minimum Expected Corrosion Characteristics of Metallic, Painted-Metallic, and Nonmetallic-Coated Steel Sheet Intended for Use as Cold-Formed Framing Members²

C 645 Specification for Nonstructural Framing Members

C 955 Specification for Load-Bearing (Transverse and Axial) Steel Studs, Runners (Tracks), and Bracing or Bridging for Screw Application of Gypsum Board and Metal Plaster Bases⁵

D 714 Test Method for Evaluating Degree of Blistering of Paints⁶

D 1005 Test Methods for Measurement of Dry-Film Thickness of Organic Coatings Using Micrometers⁶

D 1654 Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments⁶

D 4138 Test Method for Measurement of Dry-Film Thickness of Protective Coating Systems by Destructive Means⁷

D 4145 Test Method for Coating Flexibility of Prepainted Sheet⁷

2.2 ISO Standard:

ISO 9223 Corrosion of Metals and Alloys—Corrosivity of Atmospheres—Classification⁸

2.3 AISI Standard:

¹ 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.

Current edition approved October 10, 2002. Published December 2002. Originally published as A 1003 – 00. Last previous edition A 1003 – 02.

² *Annual Book of ASTM Standards*, Vol 01.06.

³ *Annual Book of ASTM Standards*, Vol 01.03.

⁴ *Annual Book of ASTM Standards*, Vol 01.01.

⁵ *Annual Book of ASTM Standards*, Vol 04.01.

⁶ *Annual Book of ASTM Standards*, Vol 06.01.

⁷ *Annual Book of ASTM Standards*, Vol 06.02.

⁸ Available from American National Standards Institute, 25 W. 43rd St., 4th Floor, New York, NY 10036 .

Specification for the Design of Cold-Formed Steel Structural Members⁹

3. Terminology

3.1 *Definitions*—See Terminology A 902 for definitions of general terminology relating to metallic-coated steel products, and Terminology A 941 for definitions of general terminology relating to uncoated steel sheet products.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *coating sequence, n*—the unbroken or uninterrupted manufacture of coils of the same coating designation.

3.2.2 *coil coater, n*—the organization that applies paint film coatings to coils of steel sheet on continuous paint lines.

3.2.3 *producer, n*—the organization that produces the steel sheet coil product from which the cold-formed members are fabricated.

3.2.4 *purlins and girts, n*—horizontal structural members that support roof deck or panel covering with loads applied principally by bending.

3.2.5 *resample, n*—additional tests made when the original test results do not satisfy the specification requirements.

3.2.6 *retest, n*—additional test, or tests, made when the original test results do not satisfy the specification requirements and the failure is due to a mechanical condition of the test specimen.

3.2.7 *roll former, n*—the organization that produces the cold-formed members.

3.2.8 *zinc-iron alloy, n*—a dull grey coating with no spangle pattern that is produced on hot-dip zinc-coated steel sheet.

3.2.8.1 *Discussion*—Zinc-iron alloy-coating is normally dull gray in appearance when produced by the manufacture of the coated sheet. Typically, the coating contains between 8 and 12 % iron, which is the result of a diffusion reaction between the steel sheet and the zinc coating during the coating process. In most applications, this product is intended to be painted. The coating offers excellent paint adhesion. When the product is exposed to the environment without a paint coating, there is a tendency for the development of a rust-colored stain on the surface. This is caused by the presence of iron in the coating. This stain may be aesthetically objectionable to some users of cold formed framing members.

3.2.9 *aluminum coating type 1, n*—a coating of aluminum and silicon alloy on steel sheet.

3.2.9.1 *Discussion*—Aluminum-coated steel sheet type 1 provides protection from corrosion primarily through the barrier action of the coating. The aluminum-silicon alloy coating provides galvanic corrosion only in marine environments. Because this coating does not generally provide galvanic protection, rust staining may be evident at area where the base metal is exposed to the environment, such as at punch-outs, cut or sheared edges of members, and at scratches.

3.2.10 *aluminum coating type 2, n*—a coating of commercially pure aluminum on steel sheet.

3.2.10.1 *Discussion*—Aluminum-coated steel sheet type 2 provides protection from corrosion primarily through the

barrier action of the coating. The aluminum coating provides galvanic corrosion only in marine environments. Because this coating does not generally provide galvanic protection, rust staining may be evident at areas where the base metal is exposed to the environment such as at punch-outs, cut or sheared edges of members, and at scratches.

3.3 *Suffixes:*

H, adj—high ductility.

L, adj—low ductility.

NS, adj—nonstructural.

3.3.1 These designations are associated with aspects of the end uses of the steel products; *H* and *L* are associated with structural or load-bearing applications, and *NS* with nonstructural or nonload-bearing applications.

4. Classification

4.1 The steel sheet is available in the following designations:

4.1.1 Structural Grade 50 Type H (ST50H), Structural Grade 340 Type H [ST340H].

4.1.2 Structural Grade 40 Type H (ST40H), Structural Grade 275 Type H [ST275H].

4.1.3 Structural Grade 37 Type H (ST37H), Structural Grade 255 Type H [ST255H].

4.1.4 Structural Grade 33 Type H (ST33H), Structural Grade 230 Type H [ST230H].

4.1.5 Structural Grade 50 Type L (ST50L), Structural Grade 340 Type L [ST340L].

4.1.6 Structural Grade 40 Type L (ST40L), Structural Grade 275 Type L [ST275L].

4.1.7 Structural Grade 37 Type L (ST37L), Structural Grade 255 Type L [ST255L].

4.1.8 Structural Grade 33 Type L (ST33L), Structural Grade 230 Type L [ST230L].

4.1.9 Nonstructural Grade 33 (NS33), Nonstructural Grade 230 [NS230].

NOTE 1—Abbreviated designations are shown in parenthesis or brackets.

4.2 Use of Type L steels is limited to purlins and girts (see 3.2.4).

5. Ordering Information

5.1 Steel sheet in coils or cut lengths shall be ordered to base metal thickness requirements expressed in increments of 0.0001 in. [0.001 mm].

5.2 Orders for product to this specification shall include the following information, as necessary to adequately describe the desired product.

5.2.1 ASTM specification number and year of issue (A 1003 – __ for inch-pound units and A 1003M – __ for SI units),

5.2.2 Name of the material (metallic-coated steel sheet), (painted metallic-coated steel sheet), or (painted nonmetallic-coated steel sheet), and designation (see 4.1).

5.2.2.1 See Specification A 755/A 755M for additional ordering requirements for the painted-metallic-coated steel sheet.

5.2.3 Type of coating (metallic-coated; zinc, zinc-iron alloy, 55 % aluminum-zinc alloy, zinc-5 % aluminum alloy,

⁹ Available from American Iron and Steel Institute, 1101 17th St., NW, Suite 1300, Washington, DC 20036.

aluminum-coated Type 1, and aluminum-coated Type 2, electrolytic zinc-coated), (painted-metallic-coated; metallic-coating and nonmetallic-coating type), (painted nonmetallic coated: nonmetallic-coating type).

5.2.3.1 Metallic coating weight [mass] designation (see Table 1), (see 9.1).

5.2.3.2 Nonmetallic coating thickness (see 9.2 or 9.3).

5.2.4 Chemically-treated or not chemically-treated (metallic-coated only).

5.2.5 Oiled or not-oiled,

5.2.6 Dimensions (show thickness, width, and flatness requirements and length, if cut lengths). Specify the applicable table of thickness tolerances of Specification A 924/A 924M, for metallic-coated, or A 568/A 568M for nonmetallic-coated sheet that applies to the order, that is, the table of thickness tolerances for 3/8-in. [10-mm] edge distance, or the table of thickness tolerances for 1-in. [25-mm] edge distance.

5.2.7 Coil size requirements (specify maximum outside diameter (OD) acceptable inside diameter (ID), and maximum weight [mass].

5.2.8 Packaging (specify requirements for banding, paper wrapping and other special packaging requirements).

5.2.9 Certification, if required (heat analysis, metallic coating weight or nonmetallic coating thickness and mechanical properties report).

5.2.10 Special Requirements, if any.

NOTE 2—Typical ordering descriptions are as follows: Steel sheet, zinc-coated, Structural Grade 50 Type H (ST50H), ASTM A 1003, Coating Designation G60, chemically-treated, not oiled, 0.035 by 48 in. by coil, thickness tolerance Table 2, 24-in ID, 30 000 lb maximum for steel studs, or

Steel sheet, zinc-coated, Structural Grade 230 Type L [ST230L], ASTM A 1003M, Coating Designation Z180, chemically-treated, not oiled, 1.00 mm by 920 mm by coil, thickness tolerance Table 2, 600 mm ID, 10 000 kg maximum for purlins.

NOTE 3—Electrolytic zinc-coated steel sheet designations indicate the coating on one surface only; therefore, the coating requirement must be specified for each side of the steel sheet as indicated in Table 1. Also, the electrolytic zinc-coated steel sheet is only available in SI values.

6. Materials and Manufacture

6.1 The ordered thickness shall be the base metal thickness.

NOTE 4—This requirement differs from the normal ordering practice for hot dip metallic-coated products where the ordered thickness includes the

**TABLE 1 Coating Weight [Mass] Requirements
(Metallic Coatings)**

Product Designation	Coating Designation
Type H and Type L	G60 [Z180] ^A A60 [Z180] ^B AZ50 [AZ150] ^C GF30 [ZGF90] ^D T1–25 [T1M 75] ^E T2–100 [T2M 300] ^E [90G/90G] ^F
Type NS	G40 [Z120] ^A A40 [Z120] ^B AZ50 [AZ150] ^C GF30 [ZGF90] ^D T1–25 [T1M 75] ^E T2–100 [T2M 300] ^E [60G/60G] ^F

^AZinc-coated steel sheet as described in Specification A 653/A 653M.

^BZinc-iron alloy-coated steel sheet as described in Specification A 653/A 653M.

^C55 % aluminum-zinc alloy-coated as described in Specification A 792/A 792M.

^DZinc-5 % aluminum alloy-coated steel sheet as described in Specification A 875/A 875M.

^EAluminum-coated Type 1 and Type 2 steel sheet as described in Specification A 463/A 463M.

^FZinc-coated steel sheet as described in Specification A 879

TABLE 2 Mechanical Properties, Base Metal

NOTE 1—All values are minimum requirements in the longitudinal direction.

Designation	Yield Strength, ksi [MPa]	Tensile Strength, ksi [MPa]	Elongation ^A in 1/2 in. [13 mm]	Elongation in 2 in. [50 mm]
ST50H [ST340H]	50 [340] ^B	65 [450]	C	10 %
ST40H [ST275H]	40 [275] ^B	55 [380]	C	10 %
ST37H [ST255H]	37 [255] ^B	52 [360]	C	10 %
ST33H [ST255H]	33 [230] ^B	45 [310]	C	10 %
ST50L [ST340L] ^D	50 [340]		20 % ^E	3 % ^F
ST40L [ST275L] ^D	40 [275]		20 % ^E	3 % ^F
ST37L [ST255L] ^D	37 [255]		20 % ^E	3 % ^F
ST33L [ST230L] ^D	33 [230]		20 % ^E	3 % ^F
NS 33	33 [230]		... ^G	... ^G

^AThe procedure for determining the local and uniform elongation can be found in the *AISI Cold Formed Design Manual*, "Standard Methods for Determination of Uniform and Local Ductility."

^BRatio of tensile strength to yield strength for the Type H steels shall not be less than 1.08.

^CElongation in 1/2-in. [13-mm] is not required.

^DThe use of Type L steels shall be limited to purlins and girts (see 3.2.4).

^ELocal elongation in a 1/2-in. [13-mm] gage length across the fracture.

^FUniform elongation outside of the fracture.

^GWhere an ellipsis appears there is no requirement.

base metal and the coating but is similar to the ordering practice for heavy coating mass electrolytic coated product.

7. Chemical Composition

7.1 Base Metal:

7.1.1 The chemical composition of the steel sheet shall conform to the requirements of Table 3.

7.1.2 All tests shall be conducted in accordance with the requirements for chemical composition as described in Specification A 924/A 924M for products with metallic coatings and Specification A 568/A 568M for nonmetallic coated products.

**TABLE 3 Chemical Composition Heat and Product Analysis,
Max %**

Element	Heat Analysis	Product Analysis
Carbon	0.25	A
Manganese	1.15	A
Phosphorus	0.20	A
Sulfur	0.04	A
Copper	0.20 ^B	0.23
Nickel	0.20 ^B	0.23
Chromium	0.15 ^{B,C}	0.19
Molybdenum	0.06 ^B	0.07
Vanadium	0.008 ^D	0.018 ^D
Columbium	0.008 ^D	0.018 ^D
Titanium	0.008 ^D	0.018 ^D

^AProduct analysis tolerances for these elements are found in Table 1 of Specification A 924/A 924M.

^BThe sum of copper, chromium, nickel, and molybdenum shall not exceed 0.50 %. When one or more of these elements are specified, the sum does not apply. If this occurs, only the individual limits on the remaining elements shall apply.

^CChromium is permitted, at producer's option, to 0.25 % maximum when the carbon content is less than or equal to 0.05 %. In this case, the limit on the sum of the four elements in footnote^B does not apply.

^DThe limits for steels whose carbon content is 0.02 % or less are as follows:

Element	Heat Analysis	Product Analysis
Vanadium	0.10	0.11
Columbium	0.045	0.055
Titanium	0.30	0.33

7.1.3 An analysis of each heat of steel shall be made by the producer to determine the percentage of elements specified in Table 3.

7.1.4 In those cases where the heat analysis is not available a product analysis test shall be performed to determine conformance with the requirements of Table 3.

7.1.5 Each of the elements listed in Table 3 shall be included in the report of heat or product analysis. When the amount of copper, nickel, chromium, or molybdenum is less than 0.02 %, report the analysis as <0.02 % or the actual determined value. When the amount of vanadium, columbium, or titanium is less than 0.008 %, report the analysis as <0.008 % or the actual determined value.

8. Mechanical Properties

8.1 The mechanical properties of the steel sheet shall conform to the requirements shown in Table 2.

8.2 Tests for mechanical properties of the “H” and “NS” steel designations shall be conducted in accordance with the tests for mechanical properties described in Specification A 924/A 924M for metallic-coated steel sheet and A 568/A 568M for nonmetallic coated steel sheet.

8.3 Tests for elongation in ½ in. [13 mm] of the “L” steel designations shall be conducted in accordance with the procedure found in the *AISI Cold Formed Design Manual*, “Standard Methods for Determination of Uniform and Local Ductility.”

9. Coating Properties

9.1 *Metallic Coating*—The minimum metallic coating weight [mass] requirements shall be as shown in Table 1.

9.1.1 Not all coatings will react the same under a given set of environmental conditions. These minimum coating designations assume normal exposure conditions and construction practices. When more severe exposure conditions are probable, for example, in coastal areas, consideration should be given to specifying heavier coating weight [mass].

9.1.2 Other metallic coatings shall be considered for inclusion to Table 1 provided they satisfy the minimum expected corrosion characteristics as indicated by laboratory testing conducted in accordance with Practice A 1004/A 1004M.

9.1.3 The minimum expected corrosion characteristics as indicated by laboratory testing for metallic coated sheet steels are as follows:

9.1.3.1 *Corrosion Standard*—No more than 10 % loss of coating from the surface of the laboratory test sample at the end of the prescribed test duration.

9.1.3.2 *Test Duration*—Minimum exposure for Type H and Type L steels is 100 h. Minimum exposure for Type NS steels is 75 h.

NOTE 5—The 10 % standard is intended to be used for laboratory evaluation only and not for assessing rust condition of installed cold formed members.

9.1.4 All tests for coating weight [mass] shall be conducted in accordance with the coating properties of Specifications A 653/A 653M, A 792/A 792M, and A 875/A 875M.

9.2 *Painted-Metallic Coatings*:

9.2.1 Painted-metallic-coated steel sheet shall consist of a metallic-coated substrate and a paint film.

9.2.2 The metallic-coated substrate shall meet the coating

weight [mass] requirements of Table 1.

9.2.3 The paint film shall have a minimum thickness of 0.5 mil per side (primer plus topcoat) with a minimum primer thickness of 0.1 mil per side.

9.2.4 The paint film thickness shall be determined according to the requirements of Test Methods D 1005 and D 4138.

9.2.5 The flexibility and adhesion of the paint film shall be determined according to the requirements of Test Method D 4145.

9.2.6 The minimum expected corrosion characteristics as indicated by laboratory testing for painted metallic-coated steel sheet are as follows:

9.2.6.1 *Corrosion Standard*—Mean creepage from a scribe shall satisfy a rating number of 6 (1/16 in. [2 mm] to 1/8 in. [3 mm]) (in accordance with Test Method D 1654) and no resistance to blistering shall satisfy the requirement of “no more than a few scattered number 8 blisters” on the surface of the test specimens at the end of the prescribed test duration. See Test Method D 714 for a description including photographic standards of the term “few.”

9.2.6.2 *Test Duration*—Minimum exposure of 500 h.

9.2.7 The laboratory procedure for determining conformance to the minimum expected corrosion characteristics is described in Practice A 1004/A 1004M.

9.3 *Nonmetallic Coatings*:

9.3.1 Nonmetallic-coated (painted) steel sheet is intended to be used in environments where the rate of corrosion is low. Typically, these environments include very dry atmospheres, such as areas of low rainfall and low humidity, and the interior of buildings that are climate-controlled. The application of painted product shall be restricted to applications defined as Category 1 or 2 of Table A1.1. These categories are described in ISO 9223.

9.3.2 Nonmetallic-coated steel which is painted after roll forming shall have a minimum paint thickness of 1.0 mil on all surfaces including the edges.

9.3.3 The minimum expected corrosion characteristics as indicated by laboratory testing for nonmetallic-coated painted sheet steel are as follows:

9.3.3.1 *Corrosion Standard*—Mean creepage from a scribe shall satisfy a rating number of 6 (1/16 in. [2 mm] to 1/8 in. [3 mm]) (in accordance with Test Method D 1654) and resistance to blistering shall satisfy the requirement of “no more than a few scattered number 8 blisters” on the surface of the test specimens at the end of the prescribed test duration. See Test Method D 714 for a description including photographic standards of the term “few.”

9.3.3.2 *Test Duration*—Minimum exposure 250 h.

9.3.4 The laboratory procedure for determining conformance to the minimum expected corrosion characteristics is described in Practice A 1004/A 1004M.

10. Number of Tests

10.1 The producer, coil coater, and rollformer shall be responsible for conducting a sufficient number of tests to certify all of the material to the applicable requirements of this specification.

10.2 *Producer*—Each coating sequence and heat shall be

tested by the producer to indicate conformance to the requirements of this specification. At least one test per coating sequence shall be performed to assess coating weight conformance.

10.3 *Coil Coater:*

10.3.1 The certified test results of the producer shall be used to certify conformance of the substrate to the requirements of this specification.

10.3.2 If certified test results are not available from the producer, the coil coater shall test the product to verify conformance of the substrate to the requirements of this specification.

10.3.2.1 *Type H and Type L Steels*—All coils shall be tested to determine conformance with applicable requirements of this specification. This requirement applies to all coils segments that have been joined to form larger coils.

10.3.2.2 *Type NS Steels*—The number of tests taken to certify the material shall be appropriate to the specific condition and processing history of the material.

10.3.3 The coil coater shall test each coil to assure conformance with the requirements of the nonmetallic coating(s).

10.4 *Roll Former:*

10.4.1 The certified result of tests for mechanical properties and coating weight from the producer or coil coater, shall be used to certify the conformance of the material used for the manufacture of the cold formed framing members.

10.4.2 If certified test results are not available from the producer or coil coater, and a certified test report is required on the purchase order, the roll former shall test in accordance with the following requirements.

10.4.2.1 *Type H and Type L Steels*—As a minimum, all coils shall be tested in order to determine conformance with the applicable requirements of this specification. This requirement applies to each of the coil segments joined together to form larger coils and after all processing of the flat sheet has taken place. Sufficient testing shall be done to assure that all of the cold formed framing members associated with a certified report satisfy the applicable requirements.

10.4.2.2 *NS Steels*—The number of tests taken to certify the material shall be appropriate to the specific condition and processing history of the material.

10.4.3 Testing by the roll former for those characteristics that are unchanged by additional processing, such as chemical composition, is not required when certified reports of test are available from the producer or coil coater.

10.4.4 Testing shall be performed by the roll former after all processing, such as cold rolling, has occurred, which alters the mechanical properties of the flat-steel sheet.

11. Retests and Resamples

11.1 *Retests:*

11.1.1 If any test specimen shows defective machining or other flaws, it must be discarded and another specimen substituted.

11.1.2 If the results on an original tensile test are within 2000 psi [14 MPa] of the required yield strength, or within two percentage points of the required elongation, a retest shall be permitted for which one random specimen from the heat or test lot shall be used. If the result on this retest specimen satisfy the

specified mechanical requirements, the lot shall be accepted.

11.2 *Resamples:*

11.2.1 If the results of the original tensile test are below the required yield strength or more than two percentage points below the required elongation, resamples shall be permitted providing material represented by the original test specimen is discarded.

11.2.2 Resampling requires two test specimens be taken to qualify the heat or test lot. The first test shall be taken adjacent to the material discarded from the lot and the second from another location within the lot to be qualified. The results of both test shall satisfy the specification requirements.

11.2.3 A maximum of two resamples shall be permitted. If the resampled material does not satisfy the requirements, the coil or coils shall be rejected.

12. Certification

12.1 When required by the purchaser as indicated on the purchase order, a certificate of compliance or a test report, or both, shall be furnished to the purchaser.

12.2 The certificate of compliance shall include a certification that the product has been manufactured and tested in accordance with the requirements of the specification, and that the test results conform to the requirements of that specification.

12.3 The test report shall show the results of all tests required by the specification and the order.

12.4 The documents shall provide information necessary to identify the product represented; for example, the manufacturer's name or brand, ASTM specification, name of the material, product designation, heat number, metallic coating weight, nonmetallic-coating type and thickness, ordered thickness, width, length, and section, unit identification (coil number, heat number, invoice number, etc.).

12.5 A signature is not required on the test report; however, the document shall identify clearly the organization submitting the report. Notwithstanding the absence of a signature, the organization submitting the report is responsible for the content of the report.

12.6 A material test report, certificate of inspection, or similar document printed from or used in electronic form from an electronic data interchange (EDI) transmission shall be regarded as having the same validity as a counterpart printed in the certifier's facility. The content of the EDI transmitted document must meet the requirements of the invoked ASTM standard and conform to any existing EDI agreement between the purchaser and the supplier. Notwithstanding the absence of a signature, the organization submitting the EDI transmission is responsible for the content of the report.

12.7 The furnishing of a certificate of compliance or test report, or both, shall not restrict the right of the purchaser to sample and test the material furnished.

12.8 When specified in the purchase order or contract, an independent third party shall be used to certify that a producer, coil coater or roll former maintains an adequate quality assurance program.

13. Product Marking

13.1 Coils from the producer and coil coater purchased

according to this specification, as a minimum, shall be identified with the producer’s name or brand, ASTM specification, product designation, coating designation, size, unit weight, purchaser’s order number, and unit identification, that is, ticket number, coil number, etc. legibly shown on a tag attached to each coil or shipping unit.

13.2 Except for the products described in Specifications C 645 and C 955 all cold-formed products manufactured from material purchased or certified to this specification, shall be

marked legibly to indicate conformance with the following: minimum steel sheet thickness, metallic-coating designation, nonmetallic-coating thickness, nonmetallic-coating type, minimum yield strength, product designation, and name of manufacturer.

14. Keywords

14.1 metallic-coated steel sheet; steel framing members—cold-formed; steel products—metallic-coated; steel sheet

ANNEX

(Mandatory Information)

A1. CATEGORIES OF ATMOSPHERES

Category	Description of Categories ^A
1	Interior climates with climate controlled conditions
2	Properly ventilated interior climates without climate controlled conditions in dry temperature locations [Exceptions — locations (1) with average to high humidity, (2) with substantial air pollution, and/or (3) close to the seacoast.] Exterior climates that are (1) very dry and (2) very warm or dry and very cold.
3	Exterior climates that are dry and warm or cold. Properly ventilated interior climates in (1) dry, warm or cold locations, and (2) temperate locations, both without climate control.
4	All temperate, average humidity exterior climates. Properly ventilated interior climates in humid locations. Unventilated buildings in temperate climates; no climate control.
5	All damp exterior climates. Unventilated buildings in humid climates.

^ASee ISO 9223, First Edition 1992–02–15.

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