



Standard Specification for Steel, Sheet, Hot Rolled, Carbon, Commercial, Structural, and High-Strength Low-Alloy, Produced by Twin-Roll Casting Process¹

This standard is issued under the fixed designation A1039/A1039M; 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 commercial and structural steel sheet in coils and cut lengths produced by the twin-roll casting process.

1.2 The steel sheet is available in the designations listed in Section 4.

1.3 The material is available in the following sizes:

Thickness—0.027 in. [0.7 mm] to 0.078 in. [2.0 mm]

Width—up to 79 in. [2000 mm]

1.4 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

NOTE 1—A description of the Twin-Roll Casting Process is included in Appendix X1.

2. Referenced Documents

2.1 ASTM Standards:²

A370 Test Methods and Definitions for Mechanical Testing of Steel Products

A568/A568M Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements for

A941 Terminology Relating to Steel, Stainless Steel, Related Alloys, and Ferroalloys

3. Terminology

3.1 *Definitions*—For definitions of other terms used in this specification refer to Terminology A941.

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 A01.19 on Steel Sheet and Strip.

Current edition approved Feb. 1, 2013. Published February 2013. Originally approved in 2004. Last previous edition approved in 2012 as A1039/A1039M – 12. DOI: 10.1520/A1039_A1039M-13.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *twin roll casting process, n*—production of steel sheet directly from liquid metal.

3.2.1.1 *Discussion*—The properties of the steel sheet are the result of the control of the casting conditions, and in some cases, through a combination of the casting process and hot rolling of the sheet.

4. Classification

4.1 Twin-roll cast steel sheet is available in the following designations:

4.1.1 Commercial steel (CS Types A, B, and D),

4.1.2 Drawing steel (DS Types A, B, and D),

4.1.3 Structural steel (SS Grades 30 [205], 33 [230], 36 [250] Types 1 and 2, 40 [275], 45 [305], 50 [340], 55 [380], 60 [410], 70 [480], and 80 [550]), and

4.1.4 High-Strength Low-Alloy steel (HSLAS, classes 1 and 2 in grades 45 [310], 50 [340], 55 [380], 60 [410], 65 [450], 70 [480] and 80 [550]).

5. Ordering Information

5.1 It is the purchaser's responsibility to specify in the purchase order all ordering information necessary to describe the required material. Examples of such information include, but are not limited to, the following:

5.1.1 ASTM specification number and year of issue,

5.1.2 Name of material and designation (direct cast or hot rolled sheet) (include grade and class, and limits for Cu, Ni, Cr, and Mo as appropriate, for CS, DS, SS, and HSLAS) (see 4.1),

5.1.2.1 When a type is not specified for CS, Type B will be furnished,

5.1.2.2 When a type is not specified for DS, Type B will be furnished,

5.1.2.3 When a class for HSLAS is not specified, Class 1 will be furnished.

5.1.2.4 When limits for Cu, Ni, Cr, and Mo are not specified, limit H (see Table 1) will be furnished.

5.1.3 Finish (see 9.1),

5.1.4 Type of edge (see 9.3),

5.1.5 Oiled or not oiled, as required (see 9.2),

*A Summary of Changes section appears at the end of this standard