



Standard Specification for Commercial Steel (CS), Sheet, Carbon (0.16 % Maximum to 0.25 % Maximum), Cold-Rolled¹

This standard is issued under the fixed designation A 794; 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.

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

1. Scope

1.1 This specification covers cold-rolled commercial steel (CS) sheet in coils and cut lengths, in which the maximum of the specified carbon range is over 0.15 and not over 0.25 %, and the maximum of the specified manganese range is not over 0.90 %. This material is ordered to chemical composition.

1.2 This specification is not applicable to the steels covered in Specifications A 366/A 366M, A 611, A 109, and A 109M. Table X1.1

2. Referenced Documents

2.1 ASTM Standards:

A 109 Specification for Steel, Strip, Carbon, Cold-Rolled²

A 109M Specification for Steel, Strip, Carbon, Cold-Rolled [Metric]²

A 366/A366M Specification for Commercial Steel (CS), Sheet, Carbon, (0.15 % Maximum), Cold-Rolled²

A 568/A568M Specification for Steel, Sheet, Carbon, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements for²

A 611 Specification for Structural Steel (SS), Sheet, Carbon, Cold-Rolled²

A 749/A749M Specification for General Requirements for Steel, Carbon and High-Strength, Low-Alloy, Hot-Rolled Strip²

E 527 Practice for Numbering Metals and Alloys (UNS)³

2.2 *Society of Automotive Engineers Standard:*⁴

J 1086 Numbering Metals and Alloys

3. Ordering Information

3.1 It is the purchaser's responsibility to specify in the purchase order all ordering information necessary to purchase the needed material. Examples of such information, include but

are not limited to, the following:

3.1.1 ASTM specification number and year of issue,

3.1.2 Name of material (cold-rolled commercial steel (CS) sheet),

3.1.3 Grade designation or chemical composition or both,

3.1.4 Copper-bearing steel (if required),

3.1.5 Finish; indicate unexposed with matte (dull) finish, or exposed with either matte (dull), commercial bright or luster finish, as required,

3.1.6 Specify oiled or not oiled, as required,

3.1.7 Dimensions (thickness, width, and whether cut lengths or coils),

3.1.7.1 As agreed upon between the purchaser and the producer, material ordered to this specification will be supplied to meet the appropriate standard or restricted thickness tolerance table shown in Specification A 568/A 568M.

NOTE 1—Not all producers are capable of meeting all the limitations of the thickness tolerance tables in Specification A 568/A 568M. The purchaser should contact the producer regarding possible limitations prior to placing an order.

3.1.8 Coil size (must include inside diameter, outside diameter, and maximum mass),

3.1.9 Quantity,

3.1.10 Application (show part identification and description),

3.1.11 Special requirements (if required), and

3.1.12 Cast or heat analysis report (request, if required).

NOTE 2—A typical ordering description is as follows: ASTM A 794-XX, Cold-Rolled Commercial Steel (CS), Grade 1018, Exposed, Matte Finish, Oiled, 0.030 by 36 by 96 in., 100 000 lb., for Part No. 5226 Steel Shelving.

4. Manufacture

4.1 *Condition*—The material shall be furnished in the annealed and temper-rolled condition but may be supplied full hard if specified.

5. Chemical Composition

5.1 The cast or heat (formerly ladle) analysis of the steel shall conform to the chemical requirements shown in Table 1, or chemical compositions can be specified from carbon 0.16 %

¹ This specification is under the jurisdiction of ASTM Committee A-1 on Steel, Stainless Steel, and Related Alloys and is the direct responsibility of Subcommittee A01.19 on Steel Sheet and Strip.

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² *Annual Book of ASTM Standards*, Vol 01.03.

³ *Annual Book of ASTM Standards*, Vol 01.01.

⁴ Available from Society of Automotive Engineers (SAE), 400 Commonwealth Dr., Warrendale, PA 15096.