



Standard Specification for Commerical Steel (CS), Sheet and Strip, Carbon (0.16 Maximum to 0.25 Maximum Percent), Hot-Rolled¹

This standard is issued under the fixed designation A 659/A659M; 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 hot-rolled carbon steel (CS) sheet and strip, 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 by Specification A 635/A 635M.

1.3 The values stated in either acceptable SI (metric) units or in other units shall be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system must be used independently of the other, without combining values in any way.

2. Referenced Documents

2.1 ASTM Standards:

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

A 635/A635M Specification for Steel, Sheet and Strip, Heavy-Thickness Coils, Carbon, Hot-Rolled²

A 749/A749M Specification for Steel, Strip, Carbon and High-Strength, Low-Alloy, Hot-Rolled, General Requirements for²

E 527 Practice for Numbering Metals and Alloys³

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 (hot-rolled commercial steel (CS) sheet, or hot-rolled commercial steel (CS) strip),

3.1.3 Grade designation or chemical composition, or both,

3.1.4 Copper-bearing steel (if required),

3.1.5 Condition (as-rolled, pickled, or blast cleaned) (see 5.1),

3.1.5.1 Material to this specification is furnished in the hot-rolled condition. Pickled (or blast cleaned) must be specified if required,

3.1.6 Oiling (see 8.2)

3.1.7 Edges (see 8.1)

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

3.1.8.1 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 of 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.

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

3.1.10 Quantity,

3.1.11 Application (show part identification and description),

3.1.12 Special requirements (if required), and

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

NOTE 2—A typical ordering description is as follows:

“ASTM A659-XX [or A659M-XX], Hot-Rolled Commercial Steel (CS) Sheet, Grade 1017, Pickled and Oiled, Cut Edge, 0.075 by 36 in. [or 1.85 by 900 mm], by coil, ID 24 in., OD 48 in., max weight 11 250 lb max [or ID 600 mm, OD 1200 mm, max, weight 7 500 kg, max], 100 000 lb [or 45 000 kg] for Part No. 6509, Shelf Leg, Cast or heat analysis report required.”

4. Materials and Manufacture

4.1 *Condition*—Unless otherwise specified, the material is furnished in the as-rolled condition (not annealed or pickled).

5. Chemical Composition

5.1 *The Cast or Heat Analysis* of the steel shall conform to the chemical requirements shown in Table 1, or chemical

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, 400 Commonwealth Dr., Warrendale, PA 15096.