



Standard Specification for Stainless and Heat-Resisting Chromium Steel Plate, Sheet, and Strip¹

This standard is issued under the fixed designation A 176; 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 stainless and heat-resisting chromium steel plate, sheet, and strip available in a wide variety of surface finishes.

1.2 The values stated in inch-pound units are to be regarded as the standard.

NOTE 1—Grades that were previously covered in both Specifications A 176 and A 240/A 240M have been removed from this specification and may now be supplied and purchased in compliance with Specification A 240/A 240M. The chemical and mechanical property requirements of these grades were identical in Specifications A 176 and A 240/A 240M at the time of removal from Specification A 176.

2. Referenced Documents

2.1 ASTM Standards:

A 240/A 240M Specification for Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels²

A 370 Test Methods and Definitions for Mechanical Testing of Steel Products²

A 480/A 480M Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip²

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

2.2 SAE Standard:

J1086 Practice for Unified Numbering for Metals and Alloys (UNS)⁴

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 A01.17 on Flat Stainless Steel Products.

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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 the Society for Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096.

3. Chemical Composition

3.1 The steel shall conform to the requirements as to chemical composition specified in Table 1, and shall conform to applicable requirements specified in Specification A 480/A 480M.

4. Mechanical Properties

4.1 The material shall conform to the mechanical properties specified in Table 2.

5. General Requirements

5.1 The following requirements for orders for material furnished under this specification shall conform to the applicable requirements of the current edition of Specification A 480/A 480M.

- 5.1.1 Definitions,
- 5.1.2 General requirements for delivery,
- 5.1.3 Ordering information,
- 5.1.4 Process,
- 5.1.5 Special tests,
- 5.1.6 Heat treatment,
- 5.1.7 Dimensions and permissible variations,
- 5.1.8 Workmanship, finish and appearance,
- 5.1.9 Number of tests/test methods,
- 5.1.10 Specimen preparation,
- 5.1.11 Retreatment,
- 5.1.12 Inspection,
- 5.1.13 Rejection and reheating,
- 5.1.14 Material test report, and
- 5.1.15 Certification.

