



Designation: B434 – 22

Standard Specification for Nickel-Molybdenum-Chromium-Iron Alloys Plate, Sheet, and Strip¹

This standard is issued under the fixed designation B434; 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 specification² covers nickel-molybdenum-chromium-iron alloys in the form of plate, sheet, and strip. The alloys are typically for general corrosive service, but are not limited to this usage.

1.2 Alloys that can currently be certified to this specification are UNS N10003 and UNS N10242.³

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to become familiar with all hazards including those identified in the appropriate Safety Data Sheet (SDS) for this product/material as provided by the manufacturer, to establish appropriate safety, health, and environmental practices, and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:⁴

¹ This specification is under the jurisdiction of ASTM Committee B02 on Nonferrous Metals and Alloys and is the direct responsibility of Subcommittee B02.07 on Refined Nickel and Cobalt and Their Alloys.

Current edition approved Oct. 1, 2022. Published November 2022. Originally approved in 1966. Last previous edition approved in 2016 as B434 – 06 (2016). DOI: 10.1520/B0434-22.

² For ASME Boiler and Pressure Vessel Code applications see related Specification SB-434 in section II of that Code.

³ New designation established in accordance with Practice E527 and SAE J1086, Recommended Practice for Numbering Metals and Alloys (UNS).

⁴ 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.

[B880 Specification for General Requirements for Chemical Check Analysis Limits for Nickel, Nickel Alloys and Cobalt Alloys](#)

[B899 Terminology Relating to Non-ferrous Metals and Alloys](#)

[B906 Specification for General Requirements for Flat-Rolled Nickel and Nickel Alloys Plate, Sheet, and Strip](#)

[B1015 Practice for Form and Style of Standards Relating to Refined Nickel and Cobalt and Their Alloys](#)

[E527 Practice for Numbering Metals and Alloys in the Unified Numbering System \(UNS\)](#)

3. Terminology

3.1 Common B02.07 terminology is found in Specification B899.

3.2 The definitions for plate, sheet, and strip used in Specification B906 apply to the products of this specification with the following adjustments:

3.2.1 Strip can be either a cold-rolled or hot-rolled material.

3.2.2 The finishes allowed for products certified to this specification are stipulated in Section 6.

4. General Requirements

4.1 Material furnished under this specification shall conform to the applicable requirements of Specification B906 unless otherwise provided herein.

4.2 Product furnished to this specification shall conform to the requirements of Specification B906. Failure to comply with the general requirements of Specification B906 constitutes nonconformance with this specification. In case of conflict between the requirements and this specification, and the requirements of Specification B906, this specification shall prevail.

5. Ordering Information

5.1 It is the responsibility of the purchaser to specify all requirements that are necessary for the safe and satisfactory performance of material ordered to this specification.

5.2 Refer to the ordering information section of Specification B906 for examples of requirements.

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