



Designation: B677 – 23

Standard Specification for Nickel-Iron-Chromium-Molybdenum, Iron-Nickel-Chromium-Molybdenum-Copper, and Nickel-Iron-Chromium-Molybdenum-Nitrogen Seamless Pipe and Tube¹

This standard is issued under the fixed designation B677; 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 UNS N08925, UNS N08354, UNS N08926², and UNS N08935 seamless, cold-worked or hot-finished pipe and tube intended for general corrosive service.

1.2 ASTM International has adopted definitions whereby some grades, such as UNS N08904 previously in this specification, were recognized as stainless steels, because those grades have iron as the largest element by mass percent. Such grades are under the oversight of ASTM Committee A01 and its subcommittees. The products of N08904 previously covered in this specification are now covered by Specifications [A269](#) and [A312/A312M](#).

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.*

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.

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² New designation established in accordance with ASTM [E527](#) and SAE J1086, Recommended Practice for Numbering Metals and Alloys (UNS).

2. Referenced Documents

- 2.1 *ASTM Standards*:³
- [A269](#) Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service
 - [A312/A312M](#) Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes
 - [B829](#) Specification for General Requirements for Nickel and Nickel Alloys Seamless Pipe and Tube
 - [B899](#) Terminology Relating to Non-ferrous Metals and Alloys
 - [E527](#) Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

3. Terminology

3.1 Definitions:

3.1.1 For definitions of terms used in this specification, refer to Terminology [B899](#).

4. General Requirements

4.1 Material furnished under this specification shall conform to the requirements of Specification [B829](#) unless otherwise provided herein. In the case of conflict, the requirements of this specification shall take precedence.

5. Ordering Information

5.1 It is the responsibility of the purchaser to specify all requirements that are necessary for material ordered under this specification. Examples of such requirements include, but are not limited to, the following:

- 5.1.1 Alloy name or UNS number.
- 5.1.2 ASTM designation and year of issue.
- 5.1.3 Finish.
- 5.1.4 *Dimensions*:

5.1.4.1 *Tube*—Outside diameter and the average or minimum wall thickness.

5.1.4.2 *Pipe*—Standard pipe size and schedule.

³ 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.

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