



Standard Specification for Nickel-Iron-Chromium-Molybdenum-Columbium Stabilized Alloy (UNS N08700) Plate, Sheet, and Strip¹

This standard is issued under the fixed designation B599; 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 nickel-iron-chromium-molybdenum-columbium stabilized alloy (UNS N08700)² plate, sheet, and strip in the solution-annealed condition.

1.2 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.

1.3 *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 Material Safety Data Sheet (MSDS) for this product/material as provided by the manufacturer; to establish appropriate safety and health practices, and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:³

A262 Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels

E8/E8M Test Methods for Tension Testing of Metallic Materials

E10 Test Method for Brinell Hardness of Metallic Materials

E18 Test Methods for Rockwell Hardness of Metallic Materials

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E55 Practice for Sampling Wrought Nonferrous Metals and Alloys for Determination of Chemical Composition

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, 2014. Published October 2014. Originally approved in 1980. Last previous edition approved in 2009 as B599 – 92 (2009) ^{ϵ 1}. DOI: 10.1520/B0599-92R14.

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

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.

E140 Hardness Conversion Tables for Metals Relationship Among Brinell Hardness, Vickers Hardness, Rockwell Hardness, Superficial Hardness, Knoop Hardness, Scleroscope Hardness, and Leeb Hardness

E350 Test Methods for Chemical Analysis of Carbon Steel, Low-Alloy Steel, Silicon Electrical Steel, Ingot Iron, and Wrought Iron

E353 Test Methods for Chemical Analysis of Stainless, Heat-Resisting, Maraging, and Other Similar Chromium-Nickel-Iron Alloys

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 The terms plate, sheet, and strip as used in this specification are described as follows:

3.1.2 *plate, n*—material 0.1875 in. (4.76 mm) and over in thickness and over 10 in. (254 mm) in width.

3.1.3 *sheet, n*—material under 0.1875 in. (4.76 mm) in thickness and over 24 in. (610 mm) in width.

3.1.4 *strip, n*—material under 0.1875 in. (4.76 mm) in thickness and under 24 in. (610 mm) in width.

4. Ordering Information

4.1 Orders for material under this specification should include the following information:

4.1.1 Quantity (weight or number of pieces).

4.1.2 Name of material or UNS N08700.

4.1.3 Form (plate, sheet, or strip).

4.1.4 Dimensions.

4.1.5 Type of edge required (for strip only, see 9.4).

4.1.6 *Finish* (Section 10)—For sheet ordered with No. 4 finish, specify whether one or both sides are to be polished.

4.1.7 ASTM designation and year of issue.

4.1.8 *Corrosion Test*—State if intergranular corrosion test is required (Section 8).

4.1.9 *Marking*—State if metal die identification is required on plate ¼ in. (6.35 mm) or thicker (Section 17).

4.1.10 *Certification or Test Reports*—State if certification or test reports are required (Section 16).