



Standard Specification for Nickel-Chromium-Molybdenum-Tungsten Alloys (UNS N06110) Plate, Sheet, and Strip¹

This standard is issued under the fixed designation B755; 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 rolled nickel-chromium-molybdenum-tungsten alloys (UNS N06110)² plate, sheet, and strip.

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 Safety Data Sheet (SDS) 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

B446 Specification for Nickel-Chromium-Molybdenum-Columbium Alloy (UNS N06625), Nickel-Chromium-Molybdenum-Silicon Alloy (UNS N06219), and Nickel-Chromium-Molybdenum-Tungsten Alloy (UNS N06650) Rod and Bar

B756 Specification for Nickel-Chromium-Molybdenum-Tungsten Alloy (UNS N06110) Rod and Bar

B880 Specification for General Requirements for Chemical Check Analysis Limits for Nickel, Nickel Alloys and Cobalt Alloys

E8 Test Methods for Tension Testing of Metallic Materials

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

E527 Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

E1473 Test Methods for Chemical Analysis of Nickel, Cobalt and High-Temperature Alloys

3. Terminology

3.1 *Definitions of Terms Specific to This Standard*—The terms given in **Table 1** shall apply.

4. Ordering Information

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

4.1.1 *ASTM designation.*

4.1.2 *Alloy name or UNS number.*

4.1.3 *Condition*—**Table 2** and **Appendix X1**.

4.1.4 *Finish*—**Appendix X1**.

4.1.5 *Dimensions*—Thickness, width, and length.

4.1.6 *Quantity.*

4.1.7 *Optional Requirements:*

4.1.7.1 *Sheet and Strip*—Whether to be furnished in coil, in cut straight lengths, or in random straight lengths, and

4.1.7.2 *Plate*—How plate is to be cut (**Table 3** and **Table 4**).

4.1.8 *Certification*—State if certification is required (see **Section 15**).

4.1.9 *Samples for Product (Check) Analysis*—Whether samples for product (check) analysis should be furnished (see **5.2**).

4.1.10 *Purchaser Inspection*—If the purchaser wishes to witness tests or inspection of material at place of manufacture, the purchase order must so state indicating which tests or inspections are to be witnessed (see **Section 13**).

5. Chemical Composition

5.1 The material shall conform to the composition limits specified in **Table 5**.

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 Practice E527 and SAE J1086, Recommended 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.