



Designation: B475 – 07 (Reapproved 2013)

Standard Specification for UNS N08020, UNS N08024, and UNS N08026 Nickel Alloy Round Weaving Wire¹

This standard is issued under the fixed designation B475; 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 N08020, UNS N08026, and UNS N08024 round weaving wire.

NOTE 1—Weaving wire is customarily not welded. For applications involving welding in which the wire should be stabilized against loss of corrosion resistance, the purchaser should refer to Specification B473.

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:*²

B473 Specification for UNS N08020, UNS N08024, and UNS N08026 Nickel Alloy Bar and Wire

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

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

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

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 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.

3.1.1 *weaving wire, n*—term weaving wire as used in this specification shall be understood to cover round wire intended especially for weaving.

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 Quantity (weight),

4.1.2 Name of material or UNS number,

4.1.3 Dimensions,

4.1.4 Condition (9.2),

4.1.5 Finish (9.2),

4.1.6 Inspection (14.1),

4.1.7 Certification—State if certification or a report of test results is required (Section 16),

4.1.8 ASTM designation and year of issue, and

4.1.9 If possible, the intended end use.

NOTE 2—A typical ordering description is as follows: 200 lb (90.7 kg), UNS N08020, 0.020 in. (0.508 mm), annealed and pickled, ASTM Specification B475.

5. Materials and Manufacture

5.1 The last heat treatment shall be a solution-annealing heat treatment.

NOTE 3—The recommended annealing temperatures are 1900 to 2100°F (1038 to 1149°C) for UNS N08020 and 2050 to 2200°F (1121 to 1204°C) for UNS N08026 and UNS N08024, all followed by quenching in water or rapidly cooling by other means.

5.2 Wire shall be annealed or cold drawn as a final operation to produce the specified mechanical properties.

6. Chemical Composition

6.1 The material shall conform to the requirements as to chemical composition prescribed in Table 1.

6.2 If a product (check) analysis is performed by the purchaser, the material shall conform to the product (check) analysis variations prescribed in Specification B880.