



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

This standard is issued under the fixed designation B 475; 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 B 473.²

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 ASTM Standards:

B 473 Specification for UNS N08020, UNS N08026, and UNS N08024 Nickel Alloy Bar and Wire²

E 8 Test Methods for Tension Testing of Metallic Materials³

E 1473 Test Methods for Chemical Analysis of Nickel, Cobalt, and High-Temperature Alloys⁴

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

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),

¹ This specification is under the jurisdiction of ASTM Committee B-2 on Nonferrous Metals and Alloys and is the direct responsibility of Subcommittee B02.07 on Refined Nickel and Cobalt, and Alloys Containing Nickel or Cobalt or Both as Principal Constituents.

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² Annual Book of ASTM Standards, Vol 02.04.

³ Annual Book of ASTM Standards, Vol 03.01.

⁴ Annual Book of ASTM Standards, Vol 03.06.

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 B 475.

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 Table 2.

7. Mechanical Properties

7.1 The material shall conform to the requirements as to mechanical properties prescribed in Table 3 at room temperature.

8. Dimensions and Permissible Variations

8.1 The diameter of the wire shall not vary from that specified by more than the permissible variations prescribed in Table 4.

9. Workmanship, Finish, and Appearance

9.1 The wire shall be uniform in diameter and free of injurious seams, laps, pits, die marks, or defects tending to impair the use of the wire.

9.2 The wire shall be supplied as annealed or cold-drawn having a finish as pickled, bright-annealed, or cold-drawn.

10. Sampling

10.1 *Lot:*