

ASTM B574 UNS N10276 Round Bar Specification

ASTM B574 specifies nickel alloy bars, rods, and wire intended for corrosion-resistant and high-temperature service. UNS N10276 (Hastelloy C-276) round bars offer exceptional resistance to pitting, crevice corrosion, and stress corrosion cracking in aggressive chemical environments.

1. Applicable Standards

ASTM B574 / ASME SB574 – Nickel Alloy Bars, Rods, and Wire

UNS N10276 – Nickel-Chromium-Molybdenum Alloy (Hastelloy C-276)

2. Chemical Composition (UNS N10276)

Element	Composition (%)
Nickel (Ni)	Balance
Chromium (Cr)	14.5 – 16.5
Molybdenum (Mo)	15.0 – 17.0
Iron (Fe)	4.0 – 7.0
Tungsten (W)	3.0 – 4.5
Carbon (C)	≤ 0.01
Manganese (Mn)	≤ 1.0
Silicon (Si)	≤ 0.08
Phosphorus (P)	≤ 0.04
Sulfur (S)	≤ 0.03

3. Mechanical Properties (Room Temperature)

Property	Requirement
Tensile Strength	≥ 100 ksi (690 MPa)
Yield Strength (0.2% offset)	≥ 41 ksi (283 MPa)
Elongation	≥ 40 %

4. Heat Treatment

UNS N10276 round bars are supplied in the solution annealed condition unless otherwise specified.

5. Size Range

Diameter: 6 mm – 450 mm

Length: Random length or cut-to-length

6. Surface Finish

Black, Peeled, Turned, Ground, Polished

7. Inspection & Certification

Chemical analysis, mechanical testing, and dimensional inspection are performed in accordance with ASTM B574. Products are supplied with EN 10204 3.1 Mill Test Certificates.

8. Typical Applications

Chemical processing equipment, oil and gas production, pollution control systems, heat exchangers, reactors, and other severe corrosion service applications.

