Inconel 625 Round Rod (UNS N06625) — Technical Data Sheet

Inconel 625 Round Rod supplied to ASTM B446 / ASME SB446 — values are minimum requirements per the governing ASTM specification.

Chemical Composition (ASTM B446)

Element	Content
Nickel (Ni)	Balance
Chromium (Cr)	20.0–23.0%
Molybdenum (Mo)	8.0–10.0%
Niobium + Tantalum (Nb + Ta)	3.15–4.15%
Iron (Fe)	5.00% max.
Cobalt (Co)	1.00% max.
Carbon (C)	0.10% max.
Manganese (Mn)	0.50% max.
Silicon (Si)	0.50% max.
Phosphorus (P)	0.015% max.
Sulfur (S)	0.015% max.
Aluminum (Al)	0.40% max.
Titanium (Ti)	0.40% max.

Mechanical Properties (Minimum, Room Temperature)

Product Form	Condition	Tensile Strength, min.	Yield Strength (0.2%), min.	Elongation, min.
Round rod up to 101.6 mm (4 in.) dia.	ASTM B446 Grade 1, annealed	>=827 MPa (120 ksi)	>=414 MPa (60 ksi)	30%
Round rod over 101.6 to 254 mm dia.	ASTM B446 Grade 1, annealed	>=758 MPa (110 ksi)	>=345 MPa (50 ksi)	25%
Round rod, all sizes	ASTM B446 Grade 2, solution annealed	>=690 MPa (100 ksi)	>=276 MPa (40 ksi)	30%

Physical Properties (Typical)

Property	Value
Alloy	Inconel 625
UNS	N06625
Werkstoff	2.4856
Density	Approx. 8.44 g/cm³
Melting Range	Approx. 1290–1350°C
Alloy Type	Nickel-chromium-molybdenum
Strengthening	Solid-solution (Mo, Nb)

Heat Treatment

Condition	Treatment Behind the Round Rod
Grade 1	Annealed at 871 °C (1600 °F) minimum for strength-led duty
Grade 2	Solution annealed at 1093 °C (2000 °F) minimum for creep-led service

Standards and Designations

Standard	Product or Application
ASTM B446 / ASME SB446	Nickel alloy bar and rod, Grades 1 and 2
AMS 5666	Bars, forgings and rings, annealed
UNS N06625 - W.Nr. 2.4856 - NiCr22Mo9Nb	Material designations

Typical Supply Dimensions — Inconel 625 Round Rod

Product Form	Typical Supply Range
Hot rolled rod	6–100 mm diameter, mill skin
Peeled rod	20–300 mm diameter, machined skin
Drawn rod	3–60 mm diameter, bright skin

Surface Finishes

Surface Condition	Typical Use
Hot rolled	Mill skin for rough machining of this round rod.
Peeled	Machined skin for heavy turning from clean stock.
Drawn	Bright skin for bar feeders and close-diameter work.

Values are for reference; the mill test certificate prevails for final acceptance. Dimensions, conditions, and surface finishes are confirmed at quotation.