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

Inconel 625 Threaded 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.
Threaded rod, all F468 sizes	ASTM F468, annealed	>=827 MPa (120 ksi)	>=414 MPa (60 ksi)	30%
Bar base up to 101.6 mm (4 in.) dia.	ASTM B446 Grade 1, annealed	>=827 MPa (120 ksi)	>=414 MPa (60 ksi)	30%
Bar base over 101.6 to 254 mm dia.	ASTM B446 Grade 1, annealed	>=758 MPa (110 ksi)	>=345 MPa (50 ksi)	25%

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 Threaded Rod
Bar base, Grade 1	Annealed at 871 °C (1600 °F) minimum for strength-led duty
Bar base, Grade 2	Solution annealed at 1093 °C (2000 °F) minimum for creep-led service

Standards and Designations

Standard	Product or Application
ASTM F468	Nonferrous bolts, screws and studs, UNS N06625
ASTM F467	Corrosion-resistant nuts paired with F468 studs
ASTM B446 / ASME SB446	Bar and rod base, Grades 1 and 2
UNS N06625 - W.Nr. 2.4856 - NiCr22Mo9Nb	Material designations

Typical Supply Dimensions — Inconel 625 Threaded Rod

Product Form	Typical Supply Range
Full-length threaded rod	6–38 mm diameter (1/4–1.5 in.), UNC or metric
Cut stud blanks	6–38 mm diameter cut to stud length
Double-end studs	12–38 mm diameter per drawing

Surface Finishes

Surface Condition	Typical Use
Thread rolled	Smooth thread roots for fatigue-led joints on this threaded rod.
Thread cut	Cut threads for general bolting and short runs.
Oiled and packed	Protective oil film for export packing of threaded rod.

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