Inconel 718 Threaded Rod (UNS N07718) — Technical Data Sheet

Inconel 718 Threaded Rod supplied to ASTM B637 / ASME SB637 — values are minimum requirements per the governing ASTM specification.

Chemical Composition (ASTM B637)

Element	Content
Nickel (Ni)	50.0–55.0%
Chromium (Cr)	17.0–21.0%
Iron (Fe)	Balance
Niobium + Tantalum (Nb + Ta)	4.75–5.50%
Molybdenum (Mo)	2.80–3.30%
Titanium (Ti)	0.65–1.15%
Aluminum (Al)	0.20–0.80%
Cobalt (Co)	1.00% max.
Carbon (C)	0.08% max.
Manganese (Mn)	0.35% max.
Silicon (Si)	0.35% max.
Phosphorus (P)	0.015% max.
Sulfur (S)	0.015% max.
Copper (Cu)	0.30% max.
Boron (B)	0.002–0.006%

Mechanical Properties (Minimum, Room Temperature)

Product Form	Condition	Tensile Strength, min.	Yield Strength (0.2%), min.	Elongation, min.	Hardness
Threaded rod, all F468 sizes	ASTM F468, solution treated + aged	>=1275 MPa (185 ksi)	>=1034 MPa (150 ksi)	12%	331–450 HBW
Bar base, all sizes	ASTM B637, solution treated + aged	>=1275 MPa (185 ksi)	>=1034 MPa (150 ksi)	12%	>=331 HBW

Physical Properties (Typical)

Property	Value
Alloy	Inconel 718
UNS	N07718
Werkstoff	2.4668
Density	Approx. 8.19 g/cm³
Melting Range	Approx. 1260–1336°C
Alloy Type	Nickel-chromium-iron
Strengthening	Precipitation hardening

Heat Treatment

Step	Treatment Behind the Threaded Rod
Solution anneal	Near 940 to 1010 °C, then air cooled
First age	718 °C for 8 hours, then furnace cooled at about 55 °C per hour
Second age	621 °C for 8 hours, then air cooled

Standards and Designations

Standard	Product or Application
ASTM F468	Nonferrous bolts, screws and studs, UNS N07718
ASTM F467	Corrosion-resistant nuts paired with F468 studs
ASTM B637 / ASME SB637	Bar and rod base, solution treated and aged
UNS N07718 - W.Nr. 2.4668 - NiCr19Fe19NbMo	Material designations

Typical Supply Dimensions — Inconel 718 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.