

Quality Certifications: ISO 9001, AS9100

Density: 4.51 g/cm³

Melting Point: 1668°C

Thermal Expansion Coefficient: $8.6 \times 10^{-6} / ^\circ\text{C}$

Packaging: Moisture-proof bags + custom wooden crates

Shipping: Air, sea, and land transport options

Grade 1 Titanium bar

Grade 1 titanium stands out with its exceptional purity, exceeding 99.5%, which grants it excellent corrosion resistance and superior biocompatibility. These inherent properties make it an ideal choice for long-term use in highly reactive environments or when in direct contact with biological systems. From challenging petrochemical applications to the development of next-generation medical instruments, **Grade 1 titanium rods** consistently provide reliable performance and structural integrity over time.

Available Surface Finishes for **Grade 1 Titanium Bars**

Polished Finish: This version undergoes precision polishing, offering a smooth, reflective surface, making it suitable for applications with stringent dimensional tolerances.

Mill Finish: This option preserves the material's original machined surface, making it a cost-effective choice for further processing or special coating projects.

Grade 1 Pure Titanium Bar Specifications & Processing Information

Standards: ASTM B348, ASTM F67, ISO 5832-2

Surface Treatment: Polished (bright) or untreated (mill finish)

Delivery Condition: Hot worked (R), cold worked (Y), or annealed (M)

Diameter Range: $\Phi 6\text{mm}$ – $\Phi 300\text{mm}$ (custom sizes available upon request)

Length: Custom lengths available, up to 12 meters

Customization: Tailored processing, cutting, and surface treatments available

Delivery Time: Standard-sized titanium bars and custom orders have different lead times. We maintain a large stock of titanium bars in our warehouse. Please **consult our sales team** for more details.

Top Applications of **Grade 1 Titanium Rods** in Industry

The purity, strength, and toughness of **Gr1 Titanium bar** make it one of the most important materials in the industry, especially in applications that require good plasticity and good corrosion resistance.

Petrifaction Plant: heat exchangers/vessels/piping systems.

Medical: Surgical devices/pacemakers/centrifuges.

Marine Applications: heat exchangers/hull material/submarine ball valves.

Consumer Goods: spectacle frames/tableware/clubs/jewelry.

Grade 1 vs Grade 2 Titanium Bars: Key Differences

Feature	Grade 1 Titanium Bar	Grade 2 Titanium Bar
Chemical Composition	Fe: max 0.2%, O: max 0.18%, other elements consistent	Fe: max 0.3%, O: max 0.25%, other elements consistent

Feature	Grade 1 Titanium Bar	Grade 2 Titanium Bar
Mechanical Strength	Lowest strength, easy to process	Moderate strength
Tensile Strength	Min 240 MPa	Min 345 MPa
Yield Strength	Min 138 MPa	Min 275 MPa
Elongation	24%	20%
Ductility/Workability	Excellent, easy to form into complex shapes	Good
Corrosion Resistance	Excellent, superior in reducing acids (e.g., dilute sulfuric, hydrochloric)	Superior long-term corrosion resistance in chlorine-containing environments (e.g., seawater)
Impact Toughness	Good, suitable for high-ductility applications	Good
Typical Applications	Food processing equipment, medical devices	Chemical equipment, marine engineering, energy industry
Processing Difficulty	Easiest to process	Easy to process
Price	Slightly higher due to purity advantages	Great cost-performance ratio

More on Titanium Bar Grades: Check our blog for more detailed comparisons:
[What Is Titanium Alloy? Grades of Titanium](#)

FAQ: Common Questions About Gr1 Titanium Bars

Do you offer wholesale prices for Gr1 Titanium Bars?

Yes. If you're looking to buy Grade 1 Pure Titanium Rods in bulk, we offer discounts for large orders, perfect for long-term partnerships and large-volume clients.

Can I get a free sample of Grade 1 Pure Titanium Bar?

Yes. We offer free samples for quality testing. Customers are only required to cover the shipping cost and any import duties.

Are you the manufacturer of Grade 1 Pure Titanium Bars?

Yes, we are a professional titanium products manufacturer located in Baoji, China. We are ISO9001 and AS9100 certified. Our factory spans over 6000 square meters, equipped with over 30 different types of lathes, and we employ more than 50 staff members.