Ti-0.2Pd Titanium Bar
Shape: Round Bar, Square Bar, Rectangular Bar (Custom sizes available upon request)
Standards: ASTM B348, ASME SB348, GB/T 2965
Sizes Available:
Diameter: 0.125" (3.18mm) to 12" (305mm)
Length: 12" (305mm) to 150" (3810mm) or customized.
Surface Finishes: Machined, Ground, Shot Blasted

What is Ti-0.2Pd bar
Looking to buy Ti-0.2Pd Titanium Bar? Ti-0.2Pd titanium rod (Grade 7) is an industrially pure titanium alloy that significantly enhances its corrosion resistance by incorporating 0.12%-0.25% palladium (Pd) into pure titanium. Especially in strong oxidizing and reducing media, this alloy exhibits excellent resistance to crevice corrosion, making it an ideal choice for applications in highly corrosive environments.

In the chemical, marine engineering, and energy industries, Gr7 titanium rods are widely used in the manufacture of critical components such as reactors, autoclaves, heat exchangers, pipes, and valves, due to their stable mechanical properties and excellent corrosion resistance.

Chemical Composition (%)

Element	Ti	Pd	N	C	H	Fe	O
Content	Balance	0.12 - 0.25	≤0.03	≤0.08	≤0.015	≤0.30	≤0.25

Tensile Requirements			
Tensile Strength,	Yield Strength(0.2% Offset)	Elongation in 4D	Reduction of Area
min345Mpa	min275Mpa	min20%	min30%

Note: Specific mechanical properties may vary depending on the size and processing state. Measured reports can be provided upon request.
Physical Properties
Density: 4.51 g/cm³
Grain Size: 6.0-7.0
Melting Point: 1668°C
Customized Ti-0.2Pd Titanium Alloy Bar Commercial Information

- Trade Terms: EXW, FOB, CIF, DAP, etc. (negotiable based on your requirements)
- Payment Terms: T/T (Telegraphic Transfer)
- Pricing: The Ti-0.2Pd Titanium Alloy Bar price is typically based on weight (kg/ton) and determined based on the specific size, condition, quantity, and trade terms.
- Packaging: Standard export wooden crates, lined with moisture-proof materials to ensure safe transport.
- MOQ: Negotiable, with a flexible approach to small-batch custom orders.
- Samples: Ti-0.2Pd Titanium Bar Free Sample available for evaluation (please contact info@zctitanium.com for details).
- Lead Time: Stocked sizes available for immediate shipping. Custom sizes have a lead time of approximately 2-4 weeks (subject to final order confirmation).

- Supply Condition: Hot-working, Cold-working, Annealed.

Quality Assurance & Certifications

1. All products are strictly manufactured according to international standards to ensure chemical composition and mechanical properties meet required specifications.
2. We hold ISO 9001 and AS9100 (Aerospace) quality management certifications.
3. Every batch of material can be supplied with a Manufacturer's Test Certificate (MTC) for traceability.
4. Third-party independent testing can be arranged upon customer request, with detailed reports provided.
5. We offer comprehensive after-sales services and technical support, ensuring quick response to your technical queries and needs.

Applications of Ti-0.2Pd Bar

Due to its superior corrosion resistance and robust mechanical properties, the Ti-0.2Pd Bar is used across various industries, including:

Chemical Equipment: Reactors, storage tanks, heat exchangers, condensers, evaporators, pumps, and pipeline systems that require long-term stability in highly corrosive environments.
Marine Engineering: Ideal for seawater desalination systems, ship piping, and marine mining equipment, effectively preventing seawater corrosion.
Power Industry: Used in cooling systems, heat exchangers, and other critical components, ensuring long-lasting efficiency and durability.

Performance Comparison: Grade 7 vs Grade 2 & Grade 5 Titanium Bars

Feature	Grade 2 Titanium Bar	Grade 5 Titanium Bar	Grade 7 Titanium Bar
Chemical Composition	Pure Titanium (Ti≥99.5%)	Ti-6Al-4V Alloy	Ti-0.2Pd Alloy
Corrosion Resistance	Excellent (Oxidizing Media)	Good	Excellent (Both Oxidizing and Reducing Media)
Mechanical Properties	Moderate (Tensile Strength ≥ 345 MPa)	High (Tensile Strength ≥ 895 MPa)	Moderate (Tensile Strength ≥ 345 MPa)
Applications	Chemical, Medical	Aerospace, Automotive	Chemical, Marine, Energy
Machinability	Excellent	Moderate	Excellent
Characteristics	Cost-effective, Easy to Machine	High strength, Suitable for Heavy Load	Superior Corrosion Resistance, Ideal for Extreme Environments

Q1: What is the cost level of Grade 7 Titanium Bar in the titanium alloy family?

A: Gr 7 Titanium Bar belongs to the higher cost tiers of the titanium family. Due to the inclusion

of palladium (Pd), its price is typically 2.5 to 3.5 times higher than that of industrial pure titanium (e.g., Grade 2), depending on the market price of palladium and the product form.

Q2: Are there more economical alternatives to Grade 7 Titanium Bar for corrosion-resistant environments?

A: If your conditions allow, consider the following cost-effective alternatives:

- Grade 2: Ideal for oxidizing environments (e.g., seawater, nitric acid), and the most economical choice.
- Grade 12 (Ti-0.3Mo-0.8Ni): Offers much better corrosion resistance, especially against hot salt crevice corrosion, at a significantly lower cost than Ti-0.2Pd Titanium Alloy Bar.
- Grade 16 (Ti-0.05Pd): Retains some of the palladium advantages at a more affordable price than Ti-0.2Pd.

Q3: Can Ti-0.2Pd Titanium Rod be offered in forms other than bars?

A: Yes, in addition to bars (round, square, and rectangular), Ti-0.2Pd Titanium is available in the following forms:

- Sheets/Plates (ASTM B265)
- Pipes/Tubes (Seamless, Welded, Custom Fittings, ASTM B861/B862/B338)
- Wires/Welding Rods (ASTM B863/ASTM F67)
- Forgings (ASTM B381)

Feel free to contact our technical team for more details.

Contact Us

For inquiries about Grade 7 Titanium Rod or other titanium products, or to request custom services, don't hesitate to get in touch. As a leading Ti-0.2Pd Titanium Bar factory, we provide professional support and tailored solutions to meet your specific needs.

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