

PRODUCT DATA SHEET		TITANIUM PRODCUTS	
LATEST REVISION		Date: 01-01-2026	
Product Name	TITANIUM PRODUCTS		
Description	<p>Titanium is a lustrous transition metal known for its low density, high strength, and exceptional resistance to corrosion in seawater, aqua regia, and chlorine environments.</p> <ul style="list-style-type: none"> • Chemical Symbol: Ti • Atomic Number: 22 • CAS Number: 7440-32-6 • Standard Forms: Sheets, plates, bars, wires, tubes, forgings, and casting ingots. • Common Industry Specifications: ASTM B265 (Strip, Sheet, and Plate), ASTM B348 (Bars and Billets), ASTM F67/F136 (Medical Grades), AMS 4911 (Aerospace). 		
Application	<p>Aerospace: Aircraft structural airframes, turbine engine blades, hydraulic systems, and landing gear (primarily Grade 5 due to high strength-to-weight ratio).</p> <p>Chemical & Marine Processing: Heat exchangers, piping networks, pumps, and reaction vessels exposed to aggressive chloride chemistry or seawater.</p> <p>Medical Devices: Orthopedic bone screws, joint replacements, and dental implants (highly biocompatible; osseointegrates natively with human bone).</p> <p>Consumer Goods: Premium sports equipment (bicycle frames, golf club faces), high-end watches, and structural architectural accents.</p>		
Chemical Properties			
Element	Grade 2 (CP)		Grade 5 (Ti-6Al-4V)
Titanium (Ti)	Balance (~99%)		Balance (~90%)
Aluminum (Al)	—		5.5 to 6.75%
Vanadium (V)	—		3.5 to 4.5%

Iron (Fe)	≤ 0.30	≤0.40%
Oxygen (O)	≤0.25%	≤0.20%
Carbon (C)	≤0.08%	≤0.08%
Nitrogen (N)	≤0.03%	≤0.05%
Hydrogen (H)	≤0.015%	≤0.015%
Physical Properties		
Property	CP Grade 2 (Metric)	Alloy Grade 5 / Ti-6Al-4V (Metric)
Density	4.51 g/cm ³	4.43 g/cm ³
Melting Point	1665 °C	1660 °C
Thermal Conductivity	21.7w/m.k	6.7w/m.k
Coeff. of Thermal Expansion	8.6*10 ⁻⁶ /k	9.2*10 ⁻⁶ /k
Tensile Strength (Ultimate)	≥345Mpa	≥895Mpa
Yield Strength (0.2% Offset)	275-450Mpa	≥828Mpa
Elongation at Break	≥20%	≥10%
Modulus of Elasticity	105Gpa	114Gpa

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