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TECHNICAL DATASHEET

[Titanium Grade 4]

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► GENERAL DESCRIPTION

Ti Grade 4 (CP Titanium Grade 4) is the highest-strength grade among commercially pure titanium materials. It offers the best mechanical strength within the CP titanium series while still maintaining excellent corrosion resistance and good biocompatibility. This material is suitable for structural applications requiring high load-bearing capacity and high strength, and is widely used in demanding environments such as medical implants, high-strength industrial equipment, and marine engineering.

► DESIGNATIONS & STANDARDS

DIN	ASTM	UNS	JIS
3.7065	B348 / F67/ISO5832-2	R50700	TP550C (eq.)

► PRODUCT FORMS & APPLICABLE STANDARDS

Product Form	Applicable Standards
Plate / Sheet	ASTM B265 Grade 4; ASTM F67 Grade 4; ISO 5832-2 Grade 4; JIS H4600 Class 4
Bar / Rod	ASTM B348 Grade 4; ASTM F67 Grade 4; ISO 5832-2 Grade 4; JIS H4650 Class 4
Wire	ASTM B863 Grade 4; ASTM F67 Grade 4; ISO 5832-2 Grade 4; JIS H4670 Class 4
Tube / Pipe	ASTM B338 Grade 4; ASTM B861 Grade 4; ASTM B862 Grade 4

► CHEMICAL COMPOSITION (MASS %) *In accordance with: [ISO5832-2]*

Element	N	C	H	Fe	O	Ti
Content (%)	≤0.05	≤0.08	≤0.0125	≤0.50	≤0.40	Balance

► HEAT TREATMENT

Condition	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (4D)	Reduction of Area (%)	Hardness (HV10)
Annealed	≥345	≥275	≥20	≥30	≥150
Cold-worked	≥680	≥520	≥10	/	

► APPLICATIONS

Condition	Dimension
Medical	Dental implants / Orthopedic screws / Bone plates / Spinal fixation parts / Maxillofacial restoration parts
Aerospace	High-strength CP titanium fasteners / Brackets / Piping connectors / Lightweight load-bearing parts
Industrial	Marine equipment parts / Chemical pump parts / Heat exchanger components / Corrosion-resistant fasteners
Mechanical engineering	High-strength lightweight joint parts / Gripper structural parts / Corrosion-resistant connectors / End-tool brackets

► AVAILABLE FORMS

Available Form	Size Range	Surface Finish	Length (Customizable)	Tolerance (Customizable)	Delivery Condition
Plate	T0.5-T200.0mm	Milled / Bright	L:200/250/300 W:200/300/500/1000	-0.0/+1.0mm	Annealed
Bar	φ1.0-φ200.0mm	Ground / Precision Polished	3M/PCS	h6-h9	Annealed
Wire	φ1.0-φ3.0mm	Ground / Precision Polished	1M/PCS	h6-h9	Annealed
Tube	OD: 1.0-10.0mm ID:0.08mm-2.0mm	Ground / Precision Polished	3M/PCS	h6-h9	Annealed

Materials, specifications or special requirements not shown in the table can all be customized. Please contact our sales team.

► TESTING & CERTIFICATION

TESTING CAPABILITIES	QUALITY & TRACEABILITY
- Chemical: OES · O/N/H analyzer - Mechanical: tensile · Rockwell/Vickers · impact - NDT: ultrasonic testing (UT) - Metallography: optical & electron microscope - Dimensional: straightness / roundness / coaxiality	- ERP full-process traceability · heat-number control - Batch consistency control - Third-party testing: on request, at extra cost - Standards: ASTM · ISO · EN · AMS · DIN - MTC with each shipment

CERTIFICATION: ISO 13485 · ISO 9001

THIRD-PARTY TESTING: SGS



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