

Commercially Pure or C.P. Titanium in unalloyed. Grade 4 is the strongest of the C.P. grades, with a minimum yield strength of 480 MPa (70ksi) and has the highest allowable oxygen and iron content of the grades.

Specifications

ASTM: B265, B348, F67
AMS: 4901, 4921
AMS-T: 9046A, 9047A
MIL-T: 9046J, 9047G

Chemical Composition, %

	N	C	O	Fe	H	Ti	Other
MIN	—	—	—	—	—	—	—
MAX	0.05	0.08	0.4	0.5	0.015	Balance	0.4

Features

- Excellent resistance to corrosion and corrosion fatigue
- High strength

Applications

- Airframe and aircraft engine components
 - Marine and chemical processing and desalination plants
 - Corrosive waste disposal wells
 - Pulp and paper production
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Mechanical Properties

Room Temperature Mechanical Properties	UTS Ksi (MPa)	YS Ksi (MPa)	%EI	%RA
Specified Properties	80 (550)	70 (480)	15	30
Typical Properties	95-100 (655-690)	70-92 (480-635)	20-25	38-51

Physical Properties

Physical Property	T (°F)	T (°C)	Value	Value (SI)
Density			0.1630 lb/in ³	4.512 g/cm ³
Beta Transus	1715-1765	935-963		
Alpha Transus	1635-1685	891-918		
Melting (liquidus) Point	3000-3040	1649-1671		
Specific Heat	73	23	0.1250 Btu/°F	
Modules of Elasticity				
Electrical Resistivity	73	23	3.93 μΩ·in	.100 μΩ·m
Modules of Elasticity			15.0 x 10 ³ ksi	10.3 x 10 ⁴ MPa