

Commercially Pure or C.P. Titanium in unalloyed. Grade 2 has higher levels of iron and oxygen than other C.P. grades, which offers excellent formability and moderate strength with superior corrosion resistance. It is a good candidate for chemical and marine, aerospace and medical applications.

Specifications

ASTM: B265, B348, F67
AMS: 4902
AMS-T: 9046A, 9047A
MIL-T: 9046J, 9047G

Chemical Composition, %

	N	C	O	Fe	H	Ti	Other
MIN	—	—	—	—	—	—	—
MAX	0.03	0.10	0.25	0.30	0.0155	Balance	0.4

Features

- Excellent formability
- Superior corrosion resistance
- Moderate strength

Applications

- Airframe skins, ductwork, brackets, galley equipment
- Desalination plant tubing and tube heaters
- Chemical processing condensers, evaporators, reaction vessels
- Cryogenic vessels
- Electroplating
- Medical devices

Mechanical Properties

Typical mechanical properties for C.P. Grade 2 titanium have an approximate Fatigue Limit Range for Smooth Axial Fatigue of R=0.1 – 275-345Mpa (40-50 ksi)

Room Temperature Mechanical Properties	UTS Ksi (MPa)	YS Ksi (MPa)	%EI	%RA
Specified Minimum Properties	50 (345)	40 (275)	20	30
Typical Properties	74-88 (510-605)	49-79 (335-545)	21-29	47-54

Physical Properties

Physical Property	T (°F)	T (°C)	Value	Value (SI)
Density			0.1630 lb/in ³	4.512 g/cm ³
Beta Transus	1650-1700	899-927		
Melting (liquidus) Point	3020-3040	1660-1671		
Specific Heat	73	23	0.1250 Btu/°F	
Electrical Resistivity	104 210 606	40 99 319	294.8 μΩ·in 24.0 μΩ·in 39.4 μΩ·in	7.5 μΩ·m .61 μΩ·m 1.0 μΩ·m
Modules of Elasticity			15.0 x 10 ³ ksi	10.3 x 10 ⁴ MPa
Magnetic Attraction			none	