

# SPECIALTY METALS

**Common Name:** CP Grade 4  
Titanium Grade 4

**UNS Number:** R50700

**General Information:** Titanium Alloy Grade 4 is “unalloyed” titanium offering improved strength, moderate ductility. The material is readily weldable. This material is very corrosion resistant in highly oxidizing and mildly reducing environments. The material is castable and is often utilized in cast valves and fittings. The alloy is available as castings, wire, plate, sheet, strip, forgings, bar, and billet. Used mostly in aerospace applications.

<b>Common Specifications:</b>	<b>Specification:</b>	<b>Product Form:</b>
	AMS 4901	Sheet, Strip, and Plate
	AMS 4921	Bars, wire, forgings, and rings
	ASTM B265 (Grade 4)	Strip, Sheet, and Plate
	ASTM B348 (Grade 4)	Bars and Billets
	ASTM B367 (Grade 4)	Castings
	ASTM B381	Forgings
	ASTM F67 (Grade 4)	Unalloyed Titanium for Surgical Implants
	ISO 5832-2 Grade 4	Unalloyed Titanium for Surgical Implants
	MIL-T-9047 Ti-CP-70	Bars for forging
	MIL-T-9046	

**Chemistry Requirements:** % Maximum unless given as a range.

N	C	H	Fe	O	Residuals Each Max.	Residuals Max. Total	Ti
0.05	0.08	0.015	0.50	0.4	0.1	0.4	Balance

**Minimum Tensile Properties:**

Condition	UTS ksi (Mpa)	0.2%YS ksi (MPA)	% El.	% RA*
As specified (shape)	(80 (550))	70 (483)	15	25

**Typical Tensile Properties:**

Condition	UTS ksi (Mpa)	0.2%YS ksi (MPA)	% El.	% RA
As provided	86 (593)	75 (571)	20	-

*Note: Typical properties are not to be utilized as a requirement, but are only listed for guidance. These properties may or may not be attainable in all circumstances.*

\* %Ra not required by all specification