

SPECIALTY METALS

Common Name: CP Grade 3
Titanium Grade 3

UNS Number: R50550

General Information: Titanium Alloy Grade 3 is “unalloyed” titanium offering improved strength, moderate ductility, and ASME Code design allowables. 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, welded tube, pipe, plate, sheet, strip, forgings, bar, and billet.

Common Specifications:	Specification:	Product Form:
	AMS 4900	Sheet, Strip, and Plate
	ASME SB-265	Sheet, Strip, and Plate
	ASME SB-348	Bar and Billet
	ASTM 337	Seamless and Welded Pipe
	ASTM B265 (Grade 3)	Strip, Sheet, and Plate
	ASTM B348 (Grade 3)	Bars and Billets
	ASTM B367 (Grade 3)	Castings
	ASTM B381	Forgings
	ASTM B861	Seamless Pipe
	ASTM B862	Welded Pipe
	ASTM F67 (Grade 3)	Unalloyed Titanium for Surgical Implants
	AWS A5.16 (ERTi-3)	Weld Wire
	ISO 5832-3	Unalloyed Titanium for Surgical Implants

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	0.30	0.35	0.1	0.4	Balance

Minimum Tensile Properties:

Condition	UTS ksi (Mpa)	0.2%YS ksi (MPA)	% El.	% RA*
As specified (shape)	64 (450)	55 (380)	18	30

Typical Tensile Properties:

Condition	UTS ksi (Mpa)	0.2%YS ksi (MPA)	% El.	% RA
As provided	86 (593)	67 (462)	25	-

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 specifications