



# Specialty Metals – Strip Products

## CP Titanium Grade 1 / Ti 25

UNS R50250  
W.Nr 3.7025

CP Titanium Grade 1 is  $\alpha$ -phase titanium with the highest purity, lowest strength, and best room temperature ductility of the Commercially Pure grades. It has excellent corrosion resistance and good impact properties at low temperatures, and has good weldability. Grade 1 Titanium can be produced in a Deep Draw Quality, and can have a variety of surface conditions from Bright to Dull. This alloy is not age hardenable.

Applications include explosive bonding, Honeycomb, and heat exchangers.

Industries supplied include: power generation, chemical processing, aerospace, automotive, marine, and medical.

### Nominal Composition

	Fe	O	C	N	H	Ti
max	0.20	0.18	0.08	0.03	0.0150	Balance

### Physical Properties

	At 70°F	At 20°C
Density	0.163 lb/in <sup>3</sup>	4.51 g/cm <sup>3</sup>
Modulus of Elasticity (E)	16.3 x 10 <sup>3</sup> ksi	112 GPa
Modulus of Rigidity (G)	5.9 x 10 <sup>3</sup> ksi	41 GPa
Coefficient of Expansion	5.4 microinches/in.-°F (70-932°F)	9.7 $\mu$ m/m-°C (20-500°C)
Electrical Resistivity	21 $\mu$ ohm.in	53.3 $\mu$ ohm.cm
Thermal Conductivity	12.60 Btu-in./ft. <sup>2</sup> hr.-°F	21.79 W/m-K

### Applicable Specifications

Strip and Foil	AMS 4940, ASTM B265, ASTM F67
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### Typical Mechanical Properties – Spring Applications

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	1290°F	40-56 ksi (276- 387)	-300°F to 1000°F (-184°C to 540°C)

**For further information  
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