



# 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
----------------	-------------------------------

### 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)

Elgiloy Specialty Metals - Strip Products

Phone: 1.888.843.2350

1565 Fleetwood Dr.

[WWW.ELGILOY.COM](http://WWW.ELGILOY.COM)

Elgin, IL 60123 USA

**LIMITATION OF LIABILITY AND DISCLAIMER OF WARRANTY:**

The content in these data sheets is provided primarily by third-party melting mills and is provided for reference only. It is not intended for engineering or design.

Applications may be discussed, however, Elgiloy Specialty Metals does not recommend or endorse any material for any particular end use or application.

The data included in this data sheet are typical values and may vary.

Elgiloy Specialty Metals makes no representations or warranties, express or implied, as to the accuracy, completeness, condition, suitability, performance, fitness for a particular purpose, or merchantability of any information contained in any data sheet.

In no event will Elgiloy Specialty Metals be liable for any damages whatsoever arising from the use of the information included in the data sheets.