

## Titanium Grade 11

UNS R52250  
W.Nr 3.7225

Titanium Grade 11 has physical and mechanical properties similar to Grade 1. Due to the addition of palladium, it has enhanced corrosion resistance in crevices and reducing acid chloride environments. It has good ductility and cold formability, along with high impact toughness and excellent weldability.

Industries supplied include: chemical processing, chlorate manufacturing, desalination, and marine applications.

### Nominal Composition

	Fe	O	C	N	H	Pd	Ti
max	0.20	0.18	0.08	0.03	0.0150	0.25	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 μm/m-°C (20-500°C)
Electrical Resistivity	21 μ ohm.in	53.3 μ ohm.cm
Thermal Conductivity	12.60 Btu-in./ft. <sup>2</sup> hr.-°F	21.79 W/m-K

### Applicable Specifications

Strip and Foil

ASTM B265

### Typical Mechanical Properties – Spring Applications

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	1290°F	35 ksi (240 MPa) min 50 ksi (345 MPa) typ	-300°F to 1000°F (-184°C to 540°C)

Elgiloy Specialty Metals - Strip  
Products

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