



# ELGILOY Specialty Metals – Strip Products

<b>Titanium Grade 11</b>				<b>UNS R52250 W.Nr 3.7225</b>			
<p>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.</p> <p>Industries supplied include: chemical processing, chlorate manufacturing, desalination, and marine applications.</p>							
<b>Nominal Composition</b>							
	<b>Fe</b>	<b>O</b>	<b>C</b>	<b>N</b>	<b>H</b>	<b>Pd</b>	<b>Ti</b>
max	0.20	0.18	0.08	0.03	0.0150	0.25	Balance
<b>Physical Properties</b>							
				<b>At 70°F</b>		<b>At 20°C</b>	
<b>Density</b>				0.163 lb/in <sup>3</sup>		4.51 g/cm <sup>3</sup>	
<b>Modulus of Elasticity (E)</b>				16.3 x 10 <sup>3</sup> ksi		112 GPa	
<b>Modulus of Rigidity (G)</b>				5.9 x 10 <sup>3</sup> ksi		41 GPa	
<b>Coefficient of Expansion</b>				5.4 microinches/in.-°F (70-932°F)		9.7 µm/m-°C (20-500°C)	
<b>Electrical Resistivity</b>				21 µ ohm.in		53.3 µ ohm.cm	
<b>Thermal Conductivity</b>				12.60 Btu-in./ft. <sup>2</sup> hr.-°F		21.79 W/m-K	
<b>Applicable Specifications</b>							
Strip and Foil		ASTM B265					
<b>Typical Mechanical Properties – Spring Applications</b>							
<b>Condition</b>	<b>Heat Treatment</b>		<b>Tensile Strength</b>			<b>Suggested Operating Conditions</b>	
Annealed	1290°F		35 ksi (240 MPa) min 50 ksi (345 MPa) typ			-300°F to 1000°F (-184°C to 540°C)	
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