



## TITANIUM Gr. 5 / 6Al4V

### Key Features

- Excellent strength to weight ratio
- Higher strength at ambient temperatures than Grades 1 and 2
- Good creep resistance up to approx 300 °C (570 °F)
- Outstanding resistance to corrosion in most natural and many industrial process environments
- Approximately half the density of nickel alloys

### IMPORTANT

We will manufacture to your required mechanical properties.

## key advantages to you, our customer



0.025mm to 21mm  
(.001" to .827")



Order 3m to 3t  
(10 ft to 6000 Lbs)



Delivery:  
within 3 weeks



Wire to your spec



E.M.S available



Technical support

### TITANIUM Gr. 5 / 6Al4V available in:-

- Round wire
- Bars or lengths
- Flat wire
- Shaped wire
- Rope/Strand

### Packaging

- Coils
- Spools
- Bars or lengths



# TITANIUM Gr. 5 / 6Al4V



Chemical Composition			Specifications	Key Features	Typical Applications
Element	Min %	Max %	AMS 4928 ASTM B348 ASTM F136	Excellent strength to weight ratio Higher strength at ambient temperatures than Grades 1 and 2 Good creep resistance up to approx 300 °C (570 °F) Outstanding resistance to corrosion in most natural and many industrial process environments Approximately half the density of nickel alloys	Aerospace Jewellery Chemical Springs Bolts and various fasteners
N	-	0.05			
C	-	0.10			
H	-	0.01	<b>Designations</b>		
Fe	-	0.40	W.Nr. 3.7165 W.Nr. 3.7164 UNS R56400 AWS 151		
O	-	0.20			
Al	5.50	6.75			
V	3.50	4.50			
Ti	BAL				

<b>Density</b>	4.42 g/cm <sup>3</sup>	0.16 lb/in <sup>3</sup>
<b>Melting Point</b>	1650 °C	3000 °F
<b>Coefficient of Expansion</b>	9.0 µm/m °C (20 – 100 °C)	5.0 x 10 <sup>-6</sup> in/in °F (70 – 212 °F)
<b>Modulus of Rigidity</b>	40 – 44 kN/mm <sup>2</sup>	5800 – 6380 ksi
<b>Modulus of Elasticity</b>	105 – 120 kN/mm <sup>2</sup>	15230 – 17405 ksi

Heat Treatment of Finished Parts					
Condition as supplied by Alloy Wire	Type	Temperature		Time (Hr)	Cooling
		°C	°F		
Annealed	Stress Relieve	480	900	2	Air
Spring Temper	Stress Relieve	250	480	0.5	Air

Properties				
Condition	Approx. tensile strength		Approx. operating temperature	
	N/mm <sup>2</sup>	ksi	°C	°F
Annealed	950 – 1100	138 – 159	-200 to +400	-330 to +750
Spring Temper	1100 – 1400	159 – 203	-200 to +400	-330 to +750

The above tensile strength ranges are typical. If you require different please ask.