Technical Datasheet **AWS 151 Rev.3**

TITANIUM Gr. 5 / 6Al4V

Chemical Composition		
Element	Min %	Max %
N	-	0.05
C	-	0.10
H	-	0.01
Fe	-	0.40
O	-	0.20
Al	5.50	6.75
V	3.50	4.50
Ti	BAL	

Specifications

AMS 4928
ASTM B348
ASTM F136

Designations

W.Nr. 3.7165
W.Nr. 3.7164
UNS R56400
AWS 151

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
- Approx. half the density of nickel alloys

Typical Applications

- Aerospace
- Jewellery
- Chemical
- Springs
- Bolts and various fasteners

Density	4.42 g/cm^3	0.16 lb/in^3
Melting Point	1650 °C	3000 °F
Coefficient of Expansion	9.0 µm/m °C (20 – 100 °C)	5.0 x 10^{-6} in/in °F (70 – 212 °F)
Modulus of Rigidity	40 – 44 kN/mm^2	5800 – 6380 ksi
Modulus of Elasticity	105 – 120 kN/mm^2	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^2	**ksi**	**°C**	**°F**
Annealed	950 – 1100	138 – 159	-200 to +400	-330 to +750
Spring Temper	1000 – 1400	145 – 203	-200 to +400	-330 to +750

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