alloy wire®
international

TITANIUM Gr. 1

Key Features

Properties and chemical composition are very similar to Grade 2, but with tighter controls on O, Fe and H contents

One of the softer and more ductile grades of pure Titanium
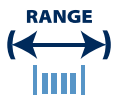
Good strength to weight ratio

Corrosion resistant in oxidizing and mildly reducing environments

Good formability

IMPORTANT
We will manufacture to your required mechanical properties.

TITANIUM Gr. 1 available in:-

- Round wire

Packaging

- Coils
- Spools

key advantages
to you, *our customer*

RANGE

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

3m **3t**

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

DELIVERY
3
WEEKS

Delivery:
within 3 weeks

Wire to your spec

E.M.S available

HOW CAN I HELP?

Technical support

TITANIUM Gr. 1

Chemical Composition			Specifications	Key Features	Typical Applications
Element	Min %	Max %	ASTM B348 ASTM F67	Properties and chemical composition are very similar to Grade 2, but with tighter controls on O, Fe and H contents	Aerospace
N	-	0.03			Automotive
C	-	0.08			Chemical Processing
H	-	0.01	**Designations**	One of the softer and more ductile grades of pure Titanium	
Fe	-	0.20	W.Nr. 3.7025 UNS R50250 AWS 150	Good strength to weight ratio	
O	-	0.18		Corrosion resistant in oxidizing and mildly reducing environments	
Residuals	-	0.40		Good formability	
Ti	BAL				

Density	4.51 g/cm3	0.163 lb/in3
Melting Point	1670°C	3040 °F
Coefficient of Expansion	8.6 µm/m °C (20 - 100 °C)	4.8 x 10-6 in/in °F (70 - 212 °F)
Modulus of Rigidity	40 - 45 kN/mm^2	5800 - 6530 ksi
Modulus of Elasticity	105 - 120 kN/mm^2	15230 - 17400 ksi

Heat Treatment of Finished Parts					
Condition as supplied by Alloy Wire	Type	Temperature		Time (Hr)	Cooling
		°C	°F		
Annealed	Stress Relieve	480	900	0.5 - 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	300 - 400	44 - 58	-200 to +400	-330 to +750
Spring Temper	550 - 850	80 - 123	-200 to +400	-330 to +750

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

AS 9100
Aerospace & Defence

ISO 9001
Quality Management

ISO 14001
Environmental

ISO 45001
Health & Safety