



## Alloy Ti 3Al/2.5V (UNS R56320)

Ti 3Al/2.5V alloy is a near alpha, alpha-beta alloy, sometimes referred to as "half-6-4." It offers 20 to 50% higher tensile strength than the commercially pure titanium at room and elevated temperatures. It is much more amenable to cold working than Ti 6Al/4V alloy and can be cold worked 75 to 85% to result in moderately high strength and good ductility. Furthermore, it is weldable as the commercially pure grades and has excellent resistance to torsion and corrosion.

Therefore, it is used principally as tubing in aircraft hydraulic systems and as foil in aircraft honeycomb panels. Its applications include aerospace parts, sport equipments, medical and dental implants.

### AVAILABLE TUBE PRODUCT FORMS

STRAIGHT

SEAMLESS

### TYPICAL MANUFACTURING SPECIFICATIONS

AMS 4943                      AMS 4946

AMS 4944                      ASTM B338

AMS 4945

Also individual customer specifications.

### TYPICAL APPLICATIONS

ARCHITECTURE

MEDICAL

MARINE

PROCESSING & CHLORATE MANUFACTURING

DIMENSIONAL STABLE ANODES

DESALINATION PLANTS

### INDUSTRIES PREDOMINANTLY USING THIS GRADE

CHEMICAL PROCESSES

MEDICAL

AEROSPACE

AUTOMOTIVE



## Technical Data

### MECHANICAL PROPERTIES

Temper	Annealed		CWSR	
Tensile Rm	90	ksi (min)	125	ksi (min)
Tensile Rm	620	MPa (min)	860	MPa (min)
R.p. 0.2% Yield	70	ksi (min)	105	ksi(min)
R.p. 0.2% Yield	485	MPa (min)	725	MPa (min)
Elongation (2" or 4D gl)	15	% (min)	10	% (min)

### PHYSICAL PROPERTIES (Room Temperature)

Specific Heat (0-100°C)	427	J.kg <sup>-1</sup> .°K <sup>-1</sup>
Thermal Conductivity	7.6	W.m <sup>-1</sup> .°K <sup>-1</sup>
Thermal Expansion	7.9	mm/m/°C
Modulus Elasticity	107	GPa
Electrical Resistivity	12.6	μohm/cm
Density	4.48	g/cm <sup>3</sup>

### CHEMICAL COMPOSITION

(% by weight)

Element	Min	Max
Al	2.5	3.5
C	-	0.05
Fe	-	0.3
H	-	0.013
N	-	0.020
O	-	0.120
Ti	Balance	
V	2	3
Y	-	0.005