Titanium Ti-3Al-2.5V, ST 925°C, Aged 480°C

Subcategory: Alpha/Near Alpha Titanium Alloy; Metal; Nonferrous Metal; Titanium Alloy

Key Words: Ti3Al2.5V, ST 925ºC, Aged 480ºC; Ti-3-2.5 STA; UNS R56320; ASTM Grade 9; Half 6-4; Tubing Alloy

Component	Wt. %
Al	3
Ti	94.5
V	2.5

Material Notes:

Information provided by Allvac and the references.

Applications: Excellent cold formability, 20-50% higher tensile properties than CP titanium grades. Primarily used in aircraft hydraulic systems.

Physical Properties	Metric	English	Comments
Density	4.48 g/cc	0.162 lb/in³	
Mechanical Properties			
Tensile Strength, Ultimate	910 MPa	132000 psi	
Tensile Strength, Yield	830 MPa	120000 psi	
Elongation at Break	11 %	11 %	
Modulus of Elasticity	100 GPa	14500 ksi	Alpha-annealed in tension.
Poisson's Ratio	0.3	0.3	alpha annealed
Shear Modulus	44 GPa	6380 ksi	Alpha-annealed
Electrical Properties			
Electrical Resistivity	0.000127 ohm-cm	0.000127 ohm-cm	

Thermal Properties

CTE, linear 20°C	9.61 µm/m-°C	5.34 µin/in-°F	20-95ºC
CTE, linear 250°C	9.86 µm/m-°C	5.48 µin/in-°F	20-315ºC; 9.67 in range 20-205ºC
CTE, linear 500°C	9.97 µm/m-°C	5.54 µin/in-°F	Average over the range 20-540ºC
Specific Heat Capacity	0.525 J/g-°C	0.125 BTU/lb-°F	Typical value for titanium alloys.
Thermal Conductivity	8.3 W/m-K	57.6 BTU-in/hr-ft²-°F	Value at 315ºC is 11.8 W/m-ºC
Melting Point	Max 1700 °C	Max 3090 °F	Liquidus
Liquidus	1700 °C	3090 °F	
Beta Transus	935 °C	1720 °F	

References for this datasheet.