TIMET TIMETAL® 230 Titanium Alloy (Ti-2.5Cu); STA

Category : Metal , Nonferrous Metal , Titanium Alloy , Alpha/Near Alpha Titanium Alloy

Material Notes:

Cold Formable Medium-Strength AlloyFeatures: This binary, age hardening alloy combines the easy formability and weldability of commercially pure titanium with improved mechanical properties, particularly at temperatures up to 350°C. It is used in the annealed condition as sheet, forgings, and extrusions for fabricating components such as bypass ducts of gas-turbine engines. Its used spread to the airframe industry, following the development of an ageing treatment which raises room-temperature tensile properties by about 25%, and nearly doubles the elevated temperature properties. Such a material is particularly attractive since it can be formed in the soft condition, thus lowering fabrication costs. It is nonmagnetic.Typical heat treatment for this alloy: Anneal at 790°C for 1 hour and air cool. Solution heat treatment at 805°C for 1 hour with a rapid air cool. Aging heat treatment at 400°C for 8-24 hours with an air cool and then for 8 hours at 475°C with air cool.Data provided by TIMET.

Order this product through the following link:
http://www.lookpolymers.com/polymer_TIMET-TIMETAL-230-Titanium-Alloy-Ti-25Cu-STA.php

Physical Properties	Metric	English	Comments
Density	4.56 g/cc	0.165 lb/in³	Typical

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	760 MPa	110000 psi	Typical
Tensile Strength, Yield	600 MPa @Strain 0.200 %	87000 psi @Strain 0.200 %	Typical
Elongation at Break	20 %	20 %	Typical
Reduction of Area	>= 25 %	>= 25 %	
Modulus of Elasticity	105 - 120 GPa	15200 - 17400 ksi	Typical
Fatigue Strength	200 MPa @# of Cycles 1.00e+7	29000 psi @# of Cycles 1.00e+7	Rod, notched, Kt = 3.3, direct stress
	450 MPa @# of Cycles 1.00e+7	65300 psi @# of Cycles 1.00e+7	Rod, rotating bend (UTS = 791 Mpa)
	470 MPa @# of Cycles 1.00e+7	68200 psi @# of Cycles 1.00e+7	rod, smooth, direct stress (UTS = 791 MPa)
	490 MPa @# of Cycles 1.00e+7	71100 psi @# of Cycles 1.00e+7	Sheet; Reverse Bend (UTS = 772 MPa)
	570 MPa	82700 psi	Sheet; Direct Stress (0-570 MPa); (UTS = 761 MPa)

Mechanical Properties	Metric	English	Comments
	@# of Cycles 1.00e+7	@# of Cycles 1.00e+7	

Thermal Properties	Metric	English	Comments
CTE, linear	9.00 µm/m-°C @Temperature 20.0 - 100 °C	5.00 µin/in-°F @Temperature 68.0 - 212 °F	
Thermal Conductivity	12.97 W/m-K	90.01 BTU-in/hr-ft²-°F	
Beta Transus	895 °C	1640 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.080 %	<= 0.080 %	
Copper, Cu	2.0 - 3.0 %	2.0 - 3.0 %	
Hydrogen, H	<= 0.010 %	<= 0.010 %	
Iron, Fe	<= 0.20 %	<= 0.20 %	
Nitrogen, N	<= 0.030 %	<= 0.030 %	
Oxygen, O	<= 0.20 %	<= 0.20 %	
Titanium, Ti	96.1 - 98 %	96.1 - 98 %	Calculated as remainder

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000650 ohm-cm	0.0000650 ohm-cm	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com
Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China