

TIMET TIMETAL® 62S Titanium Alloy (Ti-6Al-2Fe-0.1Si); Annealed Sheet/Plate & Billet/Bar

Category : Metal , Nonferrous Metal , Titanium Alloy , Beta Titanium Alloy

Material Notes:

Low Cost, Multipurpose Alloy. Tensile property data below for Annealed Sheet/Plate & Billet/Bar. Features: Properties and processing characteristics equivalent to or better than TIMETAL 6-4, but with significantly higher stiffness (elastic modulus). Due to the use of iron as the beta stabilizer, the alloy has lower formulation costs than TIMETAL 6-4. The combination of reasonable cost and excellent mechanical properties make TIMETAL 62S a practical substitute for many engineering materials. Typical heat treatment for this alloy: Mill Anneal at 760°C for 1-2 hrs, air cool Data provided by TIMET.

Order this product through the following link:

http://www.lookpolymers.com/polymer_TIMET-TIMETAL-62S-Titanium-Alloy-Ti-6Al-2Fe-01Si-Annealed-SheetPlate-BilletBar.php

Physical Properties	Metric	English	Comments
Density	4.44 g/cc	0.160 lb/in ³	Typical

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	1000 MPa	145000 psi	Typical
Tensile Strength, Yield	960 MPa @Strain 0.200 %	139000 psi @Strain 0.200 %	Typical
Elongation at Break	16 %	16 %	Typical
Modulus of Elasticity	128 GPa	18600 ksi	Typical
Fatigue Strength	600 MPa	87000 psi	Limit; test specifics not reported
Bend Radius, Minimum	4.5 t	4.5 t	Typical; on 0.078 in (2 mm) sheet

Thermal Properties	Metric	English	Comments
CTE, linear	8.60 μm/m-°C @Temperature 20.0 °C	4.78 μin/in-°F @Temperature 68.0 °F	
	9.70 μm/m-°C @Temperature 250 °C	5.39 μin/in-°F @Temperature 482 °F	
	10.6 μm/m-°C @Temperature 500 °C	5.89 μin/in-°F @Temperature 932 °F	
Specific Heat Capacity	0.500 J/g-°C	0.120 BTU/lb-°F	
Thermal Conductivity	8.60 W/m-K	59.7 BTU-in/hr-ft ² -°F	

Beta Transus Thermal Properties	1024 °C Metric	1875 °F English	Comments
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Component Elements Properties	Metric	English	Comments
Aluminum, Al	5.5 - 6.5 %	5.5 - 6.5 %	
Carbon, C	<= 0.080 %	<= 0.080 %	
Hydrogen, H	<= 0.0125 %	<= 0.0125 %	
Iron, Fe	1.3 - 2.0 %	1.3 - 2.0 %	
Nitrogen, N	<= 0.040 %	<= 0.040 %	
Oxygen, O	0.15 - 0.20 %	0.15 - 0.20 %	
Silicon, Si	0.070 - 0.13 %	0.070 - 0.13 %	
Titanium, Ti	90.7 - 93 %	90.7 - 93 %	Calculated as remainder

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.000163 ohm-cm	0.000163 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