TIMET TIMETAL® 15-3 Titanium Alloy (Ti-15V-3Cr-3Sn-3Al); Aged at 538°C

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

Material Notes:

High-Strength, Cold Formable Strip AlloyIndustry Specifications: USA Aerospace: AMS 4914A.Features: Cold formable and weldable, this strip alloy is primarily used for aircraft ducting, pressure vessels and other fabricated sheet metal structures up to 300°C.Typical heat treatment for this alloy: Solution Treatment: 790°C for 3-20 min, air cool. Age Treatment: 480-620°C for 4-16 hrs.Data provided by TIMET.

Order this product through the following link:
http://www.lookpolymers.com/polymer_TIMET-TIMETAL-15-3-Titanium-Alloy-Ti-15V-3Cr-3Sn-3Al-Aged-at-538C.php

Physical Properties	Metric	English	Comments
Density	4.78 g/cc	0.173 lb/in³	Typical

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	1160 MPa	168000 psi	Typical
Tensile Strength, Yield	1050 MPa @Strain 0.200 %	152000 psi @Strain 0.200 %	Typical
Elongation at Break	11 %	11 %	Typical
Modulus of Elasticity	103 GPa	14900 ksi	Typical
	111 GPa	16100 ksi	Alternate report from Timet
Fatigue Strength	755 MPa	110000 psi	Limit; test specifics not reported

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	
	9.20 µm/m-°C @Temperature 20.0 - 250 °C	5.11 µin/in-°F @Temperature 68.0 - 482 °F	
	9.90 µm/m-°C @Temperature 20.0 - 500 °C	5.50 µin/in-°F @Temperature 68.0 - 932 °F	
Specific Heat Capacity	0.500 J/g-°C	0.120 BTU/lb-°F	
Thermal Conductivity	8.30 W/m-K	57.6 BTU-in/hr-ft²-°F	
Maximum Service Temperature, Air	288 °C	550 °F	
Beta Transus			

Thermal Properties	Metric	English	Comments
	760 °C	1400 °F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	2.5 - 3.5 %	2.5 - 3.5 %	
Carbon, C	<= 0.050 %	<= 0.050 %	
Chromium, Cr	2.5 - 3.5 %	2.5 - 3.5 %	
Hydrogen, H	<= 0.015 %	<= 0.015 %	
Iron, Fe	<= 0.25 %	<= 0.25 %	
Nitrogen, N	<= 0.050 %	<= 0.050 %	
Oxygen, O	<= 0.13 %	<= 0.13 %	
Tin, Sn	2.5 - 3.5 %	2.5 - 3.5 %	
Titanium, Ti	72.6 - 78.5 %	72.6 - 78.5 %	Calculated as remainder
Vanadium, V	14 - 16 %	14 - 16 %	

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