

TIMET TIMETAL® 3-2.5 -0.05Pd Titanium Alloy

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

Material Notes:

Cold Workable Medium Strength Alloy. Palladium is added to this grade to enhance its corrosion behavior. Property data below is typical of TIMETAL® 3-2.5 Titanium Alloy. Data provided by TIMET.

Order this product through the following link:

http://www.lookpolymers.com/polymer_TIMET-TIMETAL-3-25-005Pd-Titanium-Alloy.php

Physical Properties	Metric	English	Comments
Density	4.51 g/cc	0.163 lb/in ³	Typical

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	650 MPa	94300 psi	Typical
Tensile Strength, Yield	550 MPa @Strain 0.200 %	79800 psi @Strain 0.200 %	Typical
Elongation at Break	15 %	15 %	Typical
Modulus of Elasticity	105 - 120 GPa	15200 - 17400 ksi	Typical
Poissons Ratio	0.30	0.30	
Shear Modulus	43.0 - 45.0 GPa	6240 - 6530 ksi	
Bend Radius, Minimum	2.5 t	2.5 t	Typical; on 0.078 in (2 mm) sheet

Thermal Properties	Metric	English	Comments
CTE, linear	9.61 µm/m-°C @Temperature 20.0 - 95.0 °C	5.34 µin/in-°F @Temperature 68.0 - 203 °F	
Thermal Conductivity	8.30 W/m-K @Temperature 20.0 - 95.0 °C	57.6 BTU-in/hr-ft ² -°F @Temperature 68.0 - 203 °F	
Melting Point	<= 1700 °C	<= 3090 °F	
Liquidus	1700 °C	3090 °F	
Beta Transus	935 °C	1720 °F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	2.5 - 3.5 %	2.5 - 3.5 %	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.080 %	<= 0.080 %	
Hydrogen, H	<= 0.015 %	<= 0.015 %	
Iron, Fe	<= 0.25 %	<= 0.25 %	
Nitrogen, N	<= 0.030 %	<= 0.030 %	
Oxygen, O	<= 0.15 %	<= 0.15 %	
Palladium, Pd	0.040 - 0.080 %	0.040 - 0.080 %	
Titanium, Ti	92.5 - 95.5 %	92.5 - 95.5 %	Calculated as remainder
Vanadium, V	2.0 - 3.0 %	2.0 - 3.0 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.000127 ohm-cm	0.000127 ohm-cm	

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