

## TIMET 75A CP Titanium (ASTM Grade 4)

Category : Metal , Nonferrous Metal , Titanium Alloy , Unalloyed/Modified Titanium

### Material Notes:

Commercially Pure Titanium. Industry Specifications: USA Aerospace: AMS 4901. Germany Engineering: 3.7065. Germany Aerospace: 3.7064. France: T-60. UK Aerospace Specification BS TA. 6. Features: The mechanical properties of CP titanium are influenced by small additions of oxygen and iron. By careful control of these additions, the various grades of commercially pure titanium are produced to give properties suited to different applications. TIMETAL 75A is equivalent to ASTM Grade 4. It has the highest strength of the four ASTM commercially pure titanium grades in addition to good ductility and moderate formability. The benefits of the good strength to weight ratio of TIMETAL 75A are retained at moderate temperatures. It has good impact properties at low temperatures. It can be satisfactorily welded, machined, cold worked, hot worked, and cast. It is nonmagnetic. Typical heat treatment for this alloy: Anneal at 700°C for 1 hour and air cool. Stress Relieve at 500°C for 30 mins and air cool. Data provided by TIMET.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_TIMET-75A-CP-Titanium-ASTM-Grade-4.php](http://www.lookpolymers.com/polymer_TIMET-75A-CP-Titanium-ASTM-Grade-4.php)

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

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	680 MPa	98600 psi	Typical
Tensile Strength, Yield	560 MPa @Strain 0.200 %	81200 psi @Strain 0.200 %	Typical
Elongation at Break	23 %	23 %	Typical
Reduction of Area	46 %	46 %	Typical
Modulus of Elasticity	105 - 120 GPa	15200 - 17400 ksi	Typical
Fatigue Strength	376 MPa	54500 psi	Smooth, Kt=1
Bend Radius, Minimum	3.0 t @Thickness 2.00 mm	3.0 t @Thickness 0.0787 in	Typical; sheet

Thermal Properties	Metric	English	Comments
CTE, linear	8.60 μm/m-°C @Temperature 20.0 - 100 °C	4.78 μin/in-°F @Temperature 68.0 - 212 °F	
	9.50 μm/m-°C @Temperature 20.0 - 300 °C	5.28 μin/in-°F @Temperature 68.0 - 572 °F	

Thermal Properties	Metric	English	Comments
	@Temperature 20.0 - 425 °C	@Temperature 68.0 - 797 °F	
Thermal Conductivity	16.95 W/m-K	117.6 BTU-in/hr-ft <sup>2</sup> -°F	
Maximum Service Temperature, Air	425 °C	797 °F	Continuous
	540 °C	1000 °F	Intermittent
Beta Transus	950 °C	1740 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.080 %	<= 0.080 %	
Hydrogen, H	<= 0.015 %	<= 0.015 %	
Iron, Fe	<= 0.50 %	<= 0.50 %	
Nitrogen, N	<= 0.050 %	<= 0.050 %	
Oxygen, O	<= 0.40 %	<= 0.40 %	
Titanium, Ti	>= 98.6 %	>= 98.6 %	Calculated as remainder

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000600 ohm-cm	0.0000600 ohm-cm	

## Contact Songhan Plastic Technology Co.,Ltd.

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