Hamilton Precision Metals
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TECHNICAL DATA SHEET

CP TITANIUM

CP Titanium is selected for its favorable strength to weight ratio and excellent corrosion resistance. Two levels of purity permit a choice of finish strength.

NOMINAL COMPOSITION:

	Titanium	Oxygen	Iron	Carbon
Grade 1	Balance	.06%	.03%	.01%
Grade 2	Balance	.12%	.08%	.02%

TYPICAL MECHANICAL PROPERTIES:[1]

	GRADE 1 ANNEALED	GRADE 2 ANNEALED
Ultimate Tensile Strength	50,000 PSI	70,000 PSI
Yield Strength (.2% Offset)	30,000 PSI	50,000 PSI
Elongation in 2" *	35%	30%
Modulus of Elasticity (Tension)	14.9×10^6 PSI	14.9×10^6 PSI
Poisson's Ratio	.35	.35

*****The measured elongation will be less as thickness decreases to .002" and less.

[1] These values may be adjusted by control of process variable – consult HPM for desired values.

CP TITANIUM

PHYSICAL PROPERTIES:[2]

Density	-	0.163 lbs/cu.in.
Melting Point (Approx.)	-	1660° C
Electrical Resistivity @ R.T.	-	56 Microhm· cm
Thermal Expansion Coefficient		
(0 to 100° C)	-	8.6×10^{-6}/°C
(0 to 315° C)	-	9.2×10^{-6}/°C
Thermal Conductivity @ R.T.	-	16.0 W/m· K
Magnetic Attraction	-	None

GENERAL INFORMATION:

The alloy can be formed from the annealed temper. Severe forming may be aided by an intermediate stress relief at 1000° F. Stress relieving may be appropriate after severe cold forming to remove residual stresses. Welding should be performed with inert gas shielded arc or spot welding. Welding with active gases, coatings, or fluxes must be avoided to prevent embrittlement.

AVAILABILITY:

CP Titanium is available from Hamilton Precision Metals as strip product from .0005" to .025" and widths up to 12.0". A foil product is available as thin as. 000085" and widths of 4.0" maximum. The material conforms to ASTM F67, ASTM B265, AMS 4902 and UNS R50250, R50400.

[2] Typical values to guide alloy selection but are not a guarantee of minimum or maximum.