

Nominal Properties for All Alloys

Melting Point	1300°C (2370°F)
Thermal Conductivity	0.18 W/(cm·°C) (10.4 BTU/(hr· ft· °F))
Specific Heat	0.2 cal/(g·°C) (0.2 BTU/(lb·°F))
Coefficient of Thermal Expansion	11x10 ⁻⁶ /°C (6.1x10 ⁻⁶ /°F)
Poisson's Ratio	0.33
Electrical Resistivity	90x10 ⁻⁶ ohm-cm (35x10 ⁻⁶ ohm-in)
Magnetic?	No
Magnetic Permeability	<1.002
Magnetic Susceptibility	3x10 ⁶ emu/g
Corrosion	Similar to 300 series stainless steel. For specific compatibility data, consult Intrinsic Devices.

Austenitic Mechanical Properties

Yield Strength	415MPa (60kpsi)
Ultimate Tensile Strength	800MPa (115kpsi)
Elongation to Failure	25%
Young's Modulus in Tension	75GPa (11x10 ⁶ psi)
Hardness	65 Ra

Alloy Specific Properties

Alloy	C	H	D
Composition (wt%)	Ti 45, Ni 52, Fe 3	Ti 38, Ni 48, Nb 14	Ti 45, Ni 55
Density	6.5g/cm ³ (0.235 lb/in ³)	6.74g/cm ³ (0.244 lb/in ³)	6.5g/cm ³ (0.235 lb/in ³)

Note: All properties given are nominals for initial design purposes. Testing is required to qualify performance in specific applications. Always test for adequate clamping force at the minimum operating temperature of the assembly.

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