



Titanium 6-2-4-2, UNS R54620, UNS R54621

Shaped, Flat, Square, Round, Fine Wire, Plated and Un-plated
AMS 4919, AMS 4952, AMS 4975, AMS 4976, AMS 4981

Titanium 6-2-4-2 Alloy Description

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A near-alpha titanium alloy Titanium 6-2-4-2 has a good combination of tensile strength, creep strength, and toughness. It is generally intended for high temperature use in environments up to 1000°F (538°C).

Applications

Header bar for heat exchangers

Medical devices and implants

Gas turbine applications

Chemistry Typical

Titanium: Balance

Aluminum: 5.50-6.50

Tin: 1.80-2.20

Zirconium: 3.60-4.40

Molybdenum: 1.80-2.20

Silicon: 0.06-0.13

Iron: 0.25 max

Oxygen: 0.15 max

Carbon: 0.08 max

Nitrogen: 0.010-0.0125

Residuals each 0.10 max, total 0.40 max

Physical Properties

Density: 0.164 lbs/in³, 4.54 g/cm³

Electrical Resistivity: 72.8-74.8 $\mu\Omega\cdot\text{in}$, 1.85-1.90 $\mu\Omega\cdot\text{m}$

Specific Heat Capacity: 0.120 BTU/lb-°F, 0.502 J/g-°F

Thermal Conductivity: BTU-in/hr-ft²-°F (W/m-K): 48.0 (6.92)

Mean Coefficient of Thermal Expansion: $\mu\text{in/in-}^\circ\text{F}$ ($\mu\text{m/m-}^\circ\text{C}$)
32.0-212°F (0-100°C): 4.28 (7.70)

Magnetic Permeability Nonmagnetic Non-magnetic

Modulus of Elasticity: KSI (MPa)

16.5×10^3 (11.4×10^3) in tension

Melting Range: 2890-3120°F (1588-1716°C)

Mechanical Properties at Room Temperature

Properties: Annealed (Typical)

Ultimate Tensile Strength: 135 KSI (930 MPa)

Yield Strength (0.2% offset): 125 KSI (862 MPa)

Elongation: 8% Min

Properties: Tempered

Contact Ulbrich Wire with requirements.

Additional Properties

Corrosion Resistance

Refer to NACE (National Association of Corrosion Engineers) for recommendations.

Finishes

Inquire with Ulbrich Wire

Forms

Continuous Coils

Cut to lengths

Precision cutting

Welding

For best results refer to: SSINA's "Welding of Stainless Steels and Other Joining Methods"

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