Ulbrich Stainless Steels & Special Metals, Inc. • 153 Washington Avenue • North Haven, CT 06473 USA • 800-243-1676 • ULBRICH.com

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

(Ti-6Al-2Sn-4Zr-2Mo) Strip*, Coil*, Foil* & Wire, AMS 4975

*** This item is in development in our strip facilities and not currently available in production quantities. Please contact our Technical Services for trials/prototypes.**

Ulbrich Shaped Wire manufactures Titanium 6-2-4-2 in small to large production quantities.

Applications

Engine applications, afterburner cans, hot airframe components

Description

Titanium 6-2-4-2 is a near-alpha titanium alloy with 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).

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 µ½•in, 1.85 - 1.90 µ½•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: µin/in-°F (µm/m-°C):
32.0 – 212 °F (0 - 100 °C): 4.28 (7.70)

Magnetic Permeability Nonmagnetic Non-magnetic

Modulus of Elasticity: ksi (MPa)
16.5 x 10^3 (11.4 x 10^3) in tension

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

Forms

Strip, Foil, Ribbon: Inquire with Ulbrich Stainless Steel
Wire: Inquire with Ulbrich Shaped Wire

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

Additional Properties

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

Finishes
Strip, Foil, Ribbon: Inquire with Ulbrich Stainless Steel
Wire: Inquire with Ulbrich Wire

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