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of Ulbrich Stainless Steels & Special
Metals, Inc.

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- PRODUCTS
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- ALLOYS / DATA SHEETS
- APPLICATIONS
- QUALITY
- SURCHARGES
- CONTACT US



Titanium 6Al-4V (Grade 5), UNS R56400

Shaped, Flat, Square, Round, Fine Wire, Plated and Un-plated
ASTM B265, AMS 4911, AMS 4928

Titanium 6Al-4V (Grade 5) Alloy Description

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Stronger than commercially pure titanium alloys, titanium 6Al-4V (Grade 5). Among its many advantages the alloy is heat treatable, has an excellent combination of strength, corrosion resistance, weldability and formability.

Applications

- Tension set rings
- Bolts, bicycle parts

Biomedical implants

High-temperature structural applications in the aircraft industry

Chemistry Typical

Titanium: Balance

Vanadium: 4.0

Aluminum: 6.0

Hydrogen: 0.015 max

Nitrogen: 0.02 max

Carbon: 0.10 max

Iron: 0.25 max

Residual each: 0.10 max., total 0.40 max

Physical Properties

Density, 0.16 lbs/in³, 4.43 g/cm³

Mean Coefficient of Thermal Expansion: in/in/°F (mm/m/°C):

70- 212°F (20- 100°C): 4.78×10^{-6} (8.6)

Thermal Conductivity: BTU-in/h-ft-°F (W/m-°K):

At 70°F (21°C): 46.5 (6.7)

Modulus of Elasticity: KSI (MPa)

16.5×10^3 (113.8×10^3) in tension

Melting Point: 3020°F (1660°C)

Mechanical Properties at Room Temperature

Properties: Annealed (Typical)

Ultimate Tensile Strength: 135 KSI (950 MPa)

Yield Strength (0.2% offset): 125 KSI (880 MPa)

Elongation: 15%

Hardness: Rc 34

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

Heat Treatment

Titanium 6-4 (Grade 5) be hardened by cold working and heat treating.

Welding

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

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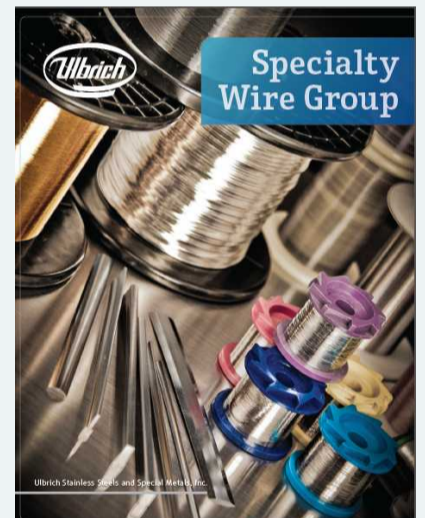


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Ulbrich Wire Group custom engineers precision wire products including; Fine Wire, Round Wire, Flat Wire, Square Wire, Shaped Profiles and PV Ribbon products. The Ulbrich Wire Group of companies are divisions of Ulbrich Stainless Steels and Special Special Metals, Inc. Our wire facilities have over 40 years of experience producing thousands of unique shapes ... [\[Learn More...\]](#)



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