



Titanium 3-2.5 (Grade 9), UNS R56320

Shaped, Flat, Square, Round, Fine Wire, Plated and Un-plated
Specifications: ASTM B265 GR9, MIL-T-9046 AB-5

Titanium 3-2.5(Grade 9) Alloy Description

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Titanium Alloy 3-2.5 (Grade 9) a medium strength, heat treatable alloy with good weldability and formability and can be used in mildly reducing to mildly oxidizing media. It is a compromise between the facility of welding and manufacturing of the pure grades and the high strength of Titanium 6Al-4V (Grade 5).

Applications

Aerospace components
Marine applications
Medical devices
Automotive

Chemistry Typical

Titanium: Balance
Vanadium: 2.0-3.0
Aluminum: 2.5-3.5
Hydrogen: .015 max
Nitrogen: 0.03 max
Carbon: 0.10 max
Iron: 0.25 max
Residuals each 0.10 max, total 0.40 max

Physical Properties

Density, 0.162 lbs/in³, 4.51 g/cm³

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

At 68 °F (20°C) 4.8 (8.3)

Mean Coefficient of Thermal Expansion: $\mu\text{in/in}^\circ\text{F}$, ($\mu\text{m/m}^\circ\text{C}$)

68-203°F (20-95 °C) 5.34 (9.61)

Modulus of Elasticity: KSI (MPa)

14.0-15.0 x 10³ (95-105 x 10³) in tension

Magnetic Permeability: Nonmagnetic

Melting Point: 3100°F (1704°C)

Mechanical Properties at Room Temperature

Properties: Annealed

Ultimate Tensile Strength: 90 KSI min (620 MPa min)

Yield Strength (0.2% offset): 70 KSI min (483 MPa min)

Elongation:

12% min (longitudinal)

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 3-2.5 (Grade 9) can be hardened by cold work and aging

Welding

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

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