



Titanium Grade 2 (Commercially Pure) (A40), UNS R50400

Shaped, Flat, Square, Round, Fine Wire, Plated and Un-plated
ASTM B265 GR2, AMS 4902, ASTM F67, MIL-T-9046CP3

Commercially Pure Titanium Grade 2 Alloy Description

Commercially Pure Titanium Grade 2 has higher strength than Grade 1 but equally corrosion resistant against most applications. Best strength to weight ratio of any corrosion resistant material. Can be used for parts requiring strength up to 400°F and oxidation resistance to 600°F.



Applications

Metal gaskets
Marine applications
Medical devices
Heat exchanger components
Deep drawing applications.

Chemistry Typical

Titanium: Balance
Iron: 0.30 max
Oxygen: 0.25 max
Carbon: 0.10 max
Nitrogen: 0.03 max
Hydrogen: 0.015 max

Residuals each 0.10 max, total 0.40 max

Physical Properties

Density, 0.163 lbs/in³, 4.51 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): 114(16.4)

Modulus of Elasticity, KSI (MPa)

15.2×10^3 (105×10^3) in tension

Mechanical Properties at Room Temperature

Properties: Annealed

Ultimate Tensile Strength: 50 KSI min (345 MPa min)

Yield Strength (0.2% offset): 40-65 KSI (276-448 MPa)

Elongation: 20% min

Properties Tempered

Commercially Pure Titanium Grade 2 can be cold rolled to achieve the temper properties required by specific customers and/or manufacturing requirements. Contact Ulbrich Wire for details.

Additional Properties

Corrosion Resistance

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

Standard Wire Finishes

Extra Clean: (XC) Extra clean is also referred to as “bright annealed” or “bright annealed and cold rolled”

Grease (round wire only): Drawn in a heavy grease produces an “Ultra bright” finish for decorative applications

Soap (round wire only): Soap is used as a lubricant in the drawing process and is not removed. It acts as a lubricant during customer part forming operation. A soap finish is available in tempered products.

Plated: Many plating options are available.

*Special finishes are available: Contact Ulbrich Wire Sales with special finish and plating requests.

Forms

Continuous Coils

Cut to lengths

Precision cutting

Heat Treatment

Commercially Pure Titanium Grade 2 can only be hardened by cold work

Welding

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

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