Titanium 15-3-3-3, UNS R58153

Shaped, Flat, Square, Round, Fine Wire, Plated and Bare Wire AMS 4914

Titanium 15-3-3-3 Alloy Description

Get A Quote

Titanium 15-3-3-3 is a metastable beta titanium alloy that offers substantial weight reductions over other engineering materials. If used in the solution treated condition the alloyhas excellent cold formability. In the aged condition, the alloy has high strength. The alloy is acceptable for use up to 550°F (228°C).

Applications

Springs
Fasteners
Aerospace applications

Chemistry: Typical

Vanadium: 14.0-16.0
Chromium: 2.5-3.5
Tin: 2.5-3.5
Aluminum: 2.5-3.5
Oxygen: 0.13 max
Carbon: 0.05 max
Nitrogen: 0.05 max

Hydrogen: 0.015 max
Iron: 0.25 max
Residuals each 0.10 max, total 0.40 max

Physical Properties

Density, 0.172 lbs/in^3, 4.76 g/cm^3

Modulus of Elasticity, ksi (MPa)
11.9 x 10^3 (82 x 10^3) in tension

Melting Point: 3034°F (1668°C)

Mechanical Properties at Room Temperature

Properties: Annealed (1450°F – A.Q.)
Ultimate Tensile Strength: 102 KSI min (703 MPa min)
Yield Strength (0.2% offset): 100 KSI min (690 MPa min)
Elongation: 12% min

Tempered:
15-3-3-3 Can Be age hardened at 900-1000°F, aging time varies from 2-3 Hours.

Aged Properties: Typical
Aging Temp/Time: 1000°F /8 Hours
Ultimate Tensile Strength: 145 KSI min (1000 MPa min)
Yield Strength (0.2% offset): 170 KSI min (1172 MPa)
Elongation: 7% min

Aging Temp/Time: 1100°F /8 Hours
Ultimate Tensile Strength: 170 KSI min (1172 MPa min)
Yield Strength (0.2% offset): 160 KSI min (1103 MPa min)
Elongation: 5% min

Aging Temp/Time: 1275°F /8 Hours
Ultimate Tensile Strength: 180 KSI min (1241 MPa min)

Yield Strength (0.2% offset): 170 KSI min (1172 MPa min)

Elongation: 5% min

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 Alloy 15-3-3-3 can be hardened by aging

Welding

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