



Specialty Metals – Strip Products

Titanium Grade 9 / Ti-3-2.5

UNS R56320
W.Nr 3.7194

Titanium Grade 9 is a near alpha, alpha-beta alloy. It offers much more strength than CP titanium, and unlike Ti-6-4 can be cold worked resulting in moderately high strength and good ductility. It is as weldable as the CP grades and has excellent resistance to corrosion.

Industries supplied include: architecture, medical, marine, processing & chlorate manufacturing, dimensional stable anodes, and desalination.

Nominal Composition

	Al	V	Fe	O	C	N	H	Y	Ti
min	2.50	2.00							
max	3.50	3.00	0.30	0.12	0.050	0.020	0.02	0.005	Balance

Physical Properties

	At 70°F	At 20°C
Density	0.162 lb/in ³	4.48 g/cm ³
Modulus of Elasticity (E)	15.5 x 10 ³ ksi	107 GPa
Modulus of Rigidity (G)	5.0 x 10 ³ ksi	35 GPa
Coefficient of Expansion	4.4 microinches/in.-°F (70-932°F)	7.9 μm/m-°C (20-500°C)
Electrical Resistivity	4.96 μ ohm.in	12.6 μ ohm.cm
Thermal Conductivity	52.7 Btu-in./ft. ² hr.-°F	7.6 W/m-K

Applicable Specifications

Strip and Foil	ASTM B265, AMS 4989
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Typical Mechanical Properties – Spring Applications

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	1200° - 1450°F	90 ksi (621 MPa) min 109 ksi (752 MPa) typ	-300°F to 1000°F (-184°C to 540°C)

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