

Grade 9 Titanium is an intermediate strength, heat treatable, alpha/beta titanium alloy which is easily fabricated. This alloy is cold rollable and its strength is nearly twice that of the commercially pure grades. The corrosion resistance of Grade 9 is very similar to commercially pure titanium.

Dimensional

Thickness	Maximum Width
0.025" - 0.003" (.635 - .08mm)	17.5" (444.5mm) as rolled edge 17.0" (431.8mm) with a slit edge
0.0029" - 0.001" (.079 - .0254mm)	16.5" (419.1mm) as rolled edge 16.0" (406.4mm) with a slit edge
0.0009" - 0.0004" (.025 - .01mm)	15.5" (393.7mm) as rolled edge 15.5" (393.7mm) with a slit edge
0.00039" - 0.00008" (.099 - .002mm)	4.25" (107.95mm) as rolled edge 4.0" (101.6mm) with a slit edge

Typical Mechanical Properties (Annealed)

UTS ksi (MPa)	YS ksi (MPa)	Elongation %
90 (620)	70 (483)	Information only

Chemical Composition (wt %)

Element	Minimum	Maximum	Element	Minimum	Maximum
N	-	.03	O	-	.15
C	-	.08	AL	2.5	3.5
H	-	.015	V	2.0	3.0
Fe	-	.25	Residual - each	-	.1

Physical Properties

Density (ii)	0.162 lb/in. ³ (4.48 g/cm ³)
Beta Transus	1715±25°F (935±15°C)
Melting (liquidus) Point	3100°F (1700°C)
Thermal Coefficient of Linear Expansion (i)	5.34x10 ⁻⁶ in/in°F (9.61x10 ⁻⁶ m/m°C)
Thermal Conductivity (i)	4.8 Btu/ft.h.°F (8.3 W/m.K)
Electrical Resistivity (i)	1.27 μ½.m
Magnetic Permeability	Nonmagnetic
Young's Modulus	at RT 14-15x10 ⁶ psi (95-105 GPa) at 230°C (450°F) 11-12x10 ⁶ psi (75-85 GPa)
Shear Modulus	at RT 6.2-6.5x10 ⁶ psi (43-45 GPa)
Poisson's Ratio	Typically 0.30

(i) Mean coefficient from room temperature to 95°C (200°F)

(ii) Typical values at room temperature of about 20 to 25°C (68 to 78°F)

TYPICAL APPLICATIONS

- Lightweight honeycomb structures for the aerospace industry
- Industrial applications such as E-Beam equipment used for food sterilization and vulcanizing rubber
- Medical device enclosures
- Speaker domes

DELIVERY

Availability

Global.

Size

Available in thicknesses and widths per table.

Temper

Available in the annealed or as rolled condition.

Surface

Clean uniform surface, 1Ra - 16Ra without discoloration or surface defects. Available with a slit edge (typical burr <10% of strip thickness) or an as-rolled edge.

Packing

Properly packaged to avoid damage in transit. International packaging available upon request.

Conformance

ASTM B265 (latest revision), DFARS Compliant.

Certifications

ISO9001, AS9001, Nadcap.