

Titanium Ti-6Al-4V

DESCRIPTION

TITANIUM TI-6AL-4V GRADE 5, also known as TI64 or UNS R56400, is a high-strength titanium alloy commonly used in aerospace, medical, and industrial applications. It is recognized under F1472 and ASME SB 265.

APPLICATIONS

Widely used for aircraft components, including structural elements and fasteners, due to its high strength and low weight.

TYPICAL PHYSICAL PROPERTIES

Density	0.16lbs./in ³
Specific Heat	0.135 (Btu/lb./ °F (32-212))
Electrical Resistivity	171 (Microhm-cm at 68°F)
Melting Point	3200°F
Thermal Conductivity	3.9
Modulus of Elasticity Tension	16.5
Beta Transus	1830 (°F +/- 25)

Availability

- Sheets
- Plates
- Round Bar
- Rod
- Strip
- Coils

Fabrication (typical values)

- Weldability - fair
- Specified bend radius for <0.070 in. x thickness - 4.5
- Specified bend radius for >0.070 in. x thickness - 5.0
- AMS 4928

TYPICAL MECHANICAL PROPERTIES

	Min	Typical
UTS, MPa	895	1000
0.2% PS, MPa	828	910
Elongation, % in 4D	10	18
Reduction of Area, %	25	-
Elastic Modulus, GPa	-	114
Hardness, HRC	-	36
Charpy V Notch Impact, J	-	24

Chemical Composition (% by weight)

Elements	Min	Max
C	-	0.08
O	-	0.20
N	-	0.05
H	-	0.125
Al	5.5	6.75
V	3.5	4.50
Fe	-	0.40
Y	-	0.005
Ti		Balance

SPECIFICATIONS

- UNS R56400 • BS TA11 • AMS 4911 • AMS 4928
- MIL-STD-2154

Special Purpose Alloys & Metals From Stock

Controlled Expansion | Glass Sealing

Kovar ASTM F 15 Alloy

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

Alloy 32/42/48/49

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

VIM VAR CORE IRON

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

SUPRA 510 (Ni50FeCr10)

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

TITANIUM ALLOYS

TITANIUM TI-6AL-4V GRADE 5

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

TITANIUM GRADE 2

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

TITANIUM 6-2-4-6

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

TITANIUM BT20

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

PH ALLOYS

17-7PH

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

15-5PH

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

17-4PH

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

ALUMINIUM HARD ALLOYS

7475 AA7475/7449 AA7449

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

7075 UNS A97075

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

7050 AMS 4050

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

7175 UNS A97075

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

2014 AMS 4121

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

2024 UNS A92024

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

2618 UNS A92618

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

2017 AMS 4037

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

2011 UNS A92011

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

NICKEL BASED ALLOYS

WASPALLOY

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

INCONEL X750

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

INCONEL 945

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

INCONEL 945X

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

NIMONIC C263

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

NIMONIC 75

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

INCONEL 909

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

INCONEL 718

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

INCONEL 660

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

HIGH TEMP ALLOYS

HAYNES 188

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

L605

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

MP35N

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

MP159

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

RENE41

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

HAYNES 230

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

ELGILOY

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

HAYNES 242

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

JUST-IN-TIME DELIVERY: All of our standard stock items can be delivery as per commitment. All materials are certified with shipment. For special orders and non-stock materials, contact our sales team for our competitive pricing and delivery.