

6Al-4V (Grade 5)

Smiths Advanced Metals

Rev: SAM/datasheets/titanium/ti-6al-4v-sheet/feb-2022

Page: 1 of 1

Grade 5 Titanium Sheet

The most popular titanium sheet grade currently available.

6Al-4V is an alpha-beta titanium alloy with low density (4.42 kg/dm³).

Also known as Grade 5, the alloy benefits from good mechanical strength combined with excellent corrosion resistance. The material also offers good weldability. The hardness of the material is improved by the introduction of aluminium and vanadium in the alloying process. 6Al-4V benefits from a low modulus of elasticity.

Smiths Advanced Metals stocks [6Al-4V titanium alloy sheets](#) in the annealed condition and various incremental sizes.

Grades / Specifications

- AMS4911
- MIL-T-9046, AMS-T-9046
- ASTM B265
- DMS1592
- BS TA10
- BS TA56

Benefits

- Good weldability
- Excellent corrosion resistance
- Excellent strength
- High strength to weight ratio



Key Applications

- Aerospace structural components
- Marine applications
- Oil & Gas parts
- Medical implants & instruments

*Chemical Composition (weight %)

	Ti	N	C	H	Fe	O	Al	V	Y	Others (each)	Others (total)
min.	Bal						5.50	3.50			
max.	Bal	0.05	0.08	0.015	0.30	0.20	6.75	4.50	0.005	0.10	0.30

* As per AMS 4911

*Mechanical Properties

	Minimum
UTS, MPa	920
0.2% Yield Strength, MPa	869
Elongation, % in 4D	6

* Properties as per AMS 4911 (0.20-0.63mm)

Lower Density

6Al-4V (Grade 5) is a low-density alloy with half the density of stainless steel and nickel-based alloys.

The result is a product with a high strength to weight ratio and consequently finds extensive use in structural components, especially in aerospace and sub-sea / above-sea applications.

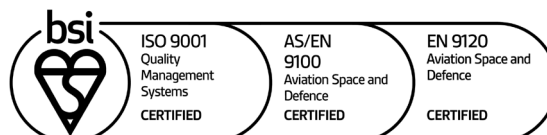
6Al-4V (Grade 5) is supplied in the annealed condition.

www.smithsadvanced.com

info@smithsadvanced.com



Stratton Business Park,
London Road, Biggleswade,
Bedfordshire SG18 8QB
Tel: **+44(0)1767 604710**



1930