Ti 6242

Smiths Advanced Metals

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Near-Alpha Titanium

Outstanding performance characteristics to give designers improved options.

6-2-4-2 (6AL-2SN-4ZR-2MO) titanium alloy combines outstanding mechanical strength and stability.

Creep resistance is also impressive, performing at temperatures as high as 538° C (1000° F). Machining and forging characteristics for the alloy are very similar to Grade 5 titanium (Ti-6Al-4V). These performance characteristics allow customers to create components that work effectively at much higher working temperatures. We stock 6-2-4-2 titanium bars in the annealed condition and in various sizes to suit your requirements.

Grades / Specifications

AMS4975	3.7144
AMS4976	6Al-2Sn-4Zr-2Mo
MSRR 8662	UNS R54620

Benefits

- Excellent resistance to corrosion
- Good machinability
- High toughness
- Outstanding creep resistance



Key Applications

- Gas turbine engines
- Aerospace structural components
- Motorsport components
- Impellers & turbines

*Chemical Composition (weight %)														
	Ti	С	Ν	0	Fe	Al	Sn	Zr	Мо	Si	Н	Y	Others (each)	Others (total)
min.	Bal					5.50	1.80	3.60	1.80	0.06				
max.	Bal	0.05	0.05	0.15	0.10	6.50	2.20	4.40	2.20	0.10	0.0125	0.005	0.10	0.30

* As per AMS 4975

Mechanical Properties							
	Minimum						
UTS, MPa (ksi)	896 (130)						
0.2% PS, MPa (ksi)	827 (120)						
Elongation, % in 51mm GL	10						
Reduction of Area, %	25						

For High Performance Applications

6242 titanium alloy finds use in high-performance applications throughout industry.

The alloy is lightweight with excellent mechanical strength, which provides designers and engineers with options, particularly in market sectors such as motorsport and aerospace. Strength to weight ratios are critical in these markets, and both titanium and aluminium feature heavily in the manufacture of high-performance components and structures.

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* Properties as per AMS 4975



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