

# **TITANIUM 6246 - AMS 4981**

The main characteristics of 6246 are being light weight with exceptional strength and corrosion resistance. This high-performance alloy contains 6% aluminum and 4% zirconium along with titanium and trace elements.

The addition of aluminum and zirconium gives 6246 titanium increased strength compared to commercially pure titanium grades. It has an ultimate tensile strength around 1100 MPa, nearly double that of the Ti-6Al-4V alloy. Yet 6246 remains relatively light, with a density of 4.54 g/cm3.

Components made from 6246 can withstand tremendous mechanical stresses while remaining incredibly light.

6246 titanium offers great resistance to corrosion, the aluminum and vanadium stabilise the alloy against oxidation and prevent degradation.

Like other titanium alloys, 6246 is incredibly durable with a long service life. Products made from this alloy can withstand heavy wear and tear over years of use with minimal maintenance required. The material does not suffer from fatigue, galling, or seizing issues.

From a manufacturing perspective, 6246 titanium can be readily formed using standard metalworking techniques like machining, welding, and forming. However, the material is considered more difficult to process compared to other titanium grades due to its higher strength.

Whether used to construct aircraft components, high-performance automotive parts, or professional-grade sports gear, 6246 titanium delivers an unbeatable combination of strength, light weight, and corrosion resistance.

Typical Applications	Related Specifications			
Compressor Discs and fan blades	<b>AMS</b> 4981			
Airframe components	<b>AMS-T</b> -9047			
Motor racing drivetrain components	<b>UNS</b> R56260			
Subsea sour service	NACE MR01-75			

#### **Chemical Composition (Wt %)**

	Al	Sn	Zr	Мо	Fe	N	О	С	н
Min	5.5	1.75	3.5	5.5	_	_	_	_	_
Max	6.5	2.25	4.5	6.5	0.15	0.04	0.15	0.04	0.0125

#### **Typical Mechanical Properties**

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	0.2% Proof Stress	Tensile Strength		Reduction of area
	MPA	MPA	%	%
Range:	1020- 1150	1090- 1240	13-16	37-42

Note 1: Variations in mechanical properties are dependent on condition / heat treatment

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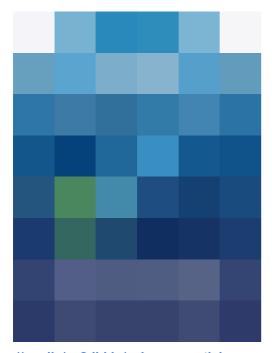
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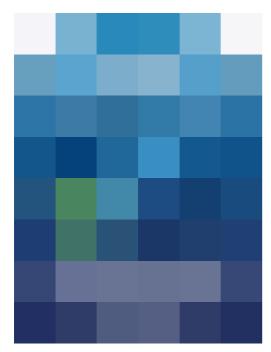
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