

## 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/cm<sup>3</sup>.

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 4981</b>								
Airframe components		<b>AMS-T-9047</b>								
Motor racing drivetrain components		<b>UNS R56260</b>								
Subsea sour service		<b>NACE MR01-75</b>								
Chemical Composition (Wt %)										
		Al	Sn	Zr	Mo	Fe	N	O	C	H
	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										

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

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

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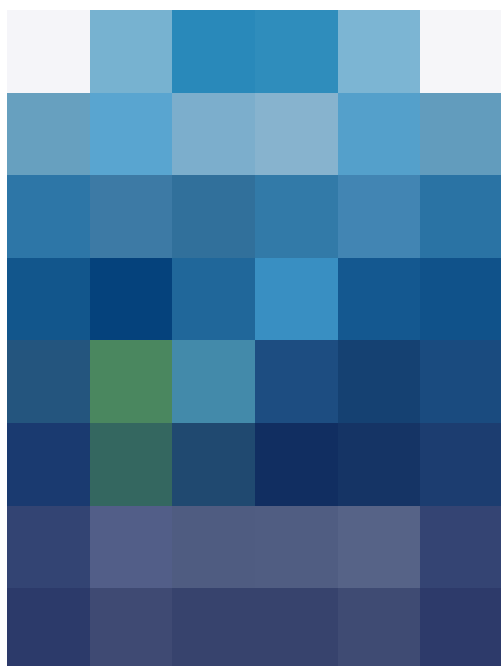
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