6246 Titanium

Smiths High Performance

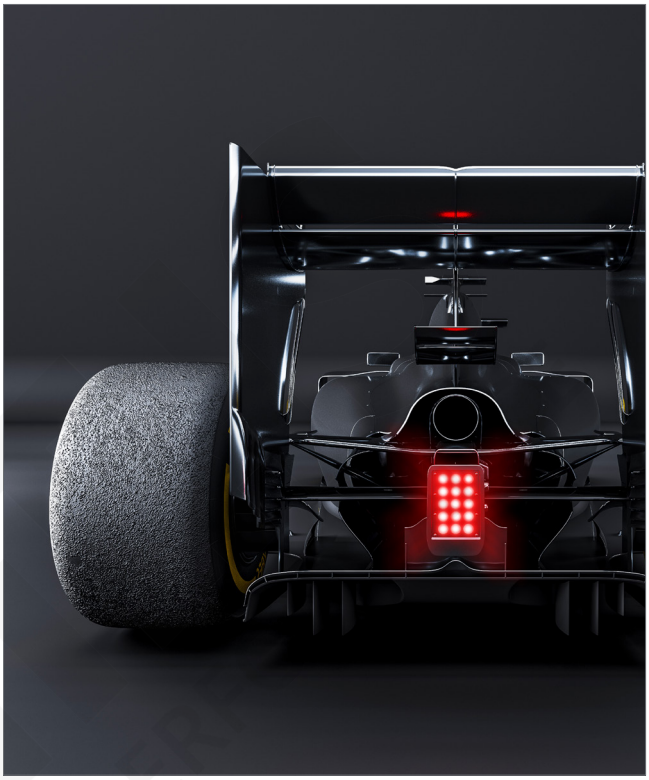
Alpha-Beta Titanium Alloy

Our product is ideal for high-technology components such as racing engines & drivetrains.

6246 Titanium Alloy (a stronger derivative of 6-2-4-2) is an alpha-beta titanium alloy offering superior high mechanical strength and toughness with good retention up to 460°C.

The alloy is heat treatable, which can achieve even high tensile strength. Corrosion resistance is excellent, including reducing environments and saltwater, and the material includes sour service approval to NACE MR-01-75 standard.

6246 titanium is an ideal engineering product for high-strength applications which require excellent corrosion resistance and low density. The alloy has a very high strength-to-weight ratio with good fatigue resistance. Material applications include production equipment in the oil and gas sector, gas turbine engine components in the aerospace sector and the manufacture of precision components for motorsport.



Typical Applications:

- Racing engine parts
- Racing engine drivetrain components
- Compressor discs
- Fan blades

Stock Availability:

- Forgings, plates, round bars

Greater Fatigue Resistance

6246 titanium contains a more complex microstructure due to thermomechanical processing, which increases strength and fatigue resistance. The resulting alloy is highly suitable for critical aerospace and motorsport components such as engine parts and compressor wheels.

The alloy's excellent corrosion resistance also results in a highly effective engineering product for sub-sea and above-sea applications. The alloy is also a highly effective light-weighting material, essential in aircraft and race car manufacture.

About Smiths High Performance

Smiths High Performance is a leading stockholder and supplier of high-performance engineering materials. We are material supply chain partners supporting **high-technology market sectors**.

SCAN ME

Further technical data available on the reverse of this Datasheet

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Chemical Composition (weight,%)

	Al	Zr	Sn	Mo	Fe	O	C	N	H	Y	Each	Total
Min.	5.50	3.50	1.75	5.50								
Max.	6.50	4.50	2.25	6.50	0.15	0.15	0.04	0.04	0.0125	0.005	0.10	0.40

Minimum Mechanical Properties for AMS 4981

Alloy	Round Bar (dia. mm)	Longitudinal Direction Rm in MPa	Rp 0.2 MPa	Elongation A4 in %	Traverse Direction Rm in MPa	Rp 0.2 MPa	Elongation A4 in %
6246	12.7 - 63.5	1172	1103	10	1172	1103	8
6246	63.5 - 76.2	1138	1069	8	1138	1069	6
6246	76.2 - 101.6	1103	1034	8	1103	1034	6

Minimum Guaranteed Mechanical Properties for 6246 Titanium

Alloy	Round Bar (dia. mm)	Longitudinal Direction Rm in MPa	Rp 0.2 MPa	Elongation A4 in %	Traverse Direction Rm in MPa	Rp 0.2 MPa	Elongation A4 in %
6246	< 50.8 *	1350	1300	5			
6246	> 50.8 - 200 **				1300	1250	3

* Supplied in the solution treated & aged condition
** 25mm thick sample capability test / supplied in the annealed condition

...where performance matters...

When you purchase high-performance materials from **Smiths High Performance**, you will join some of the biggest and best global engineering companies. We are a Tier 1 supply chain partner to the world's leading motorsport companies. Our unique business structure and ethos allow us to offer services otherwise unavailable in this market sector.

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