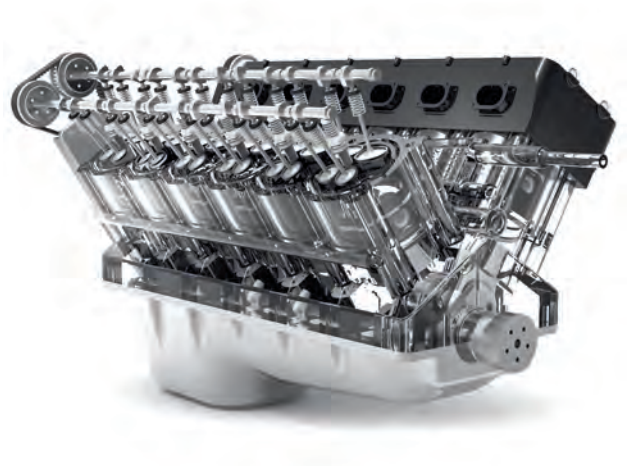
SHP 6246 Ultimate

Product Data Sheet

Titanium Alloy

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



The alloy is heat treatable and deep hardenable. Corrosion resistance is good and the material is approved for sour service in the NACE MR-01-75 standard.

The alloy is heat treatable and deep hardenable. The corrosion resistance of the material is good. 6246 titanium is ideal in sour service environments and is NACE MR

Material applications include production equipment in the oil and gas sector, gas turbine engine components in the aerospace sector and production of precision components for motorsport.

Stock availability from 50mm to 200 mm dia.

Typical Applications:

- Racing engine parts
- Racing engine drivetrain components
- Gas turbine components
- Compressor discs and fan blades
- Suitable for sour service applications

Stock Availability:

- Round bar

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About Smiths High Performance

Smiths High Performance is a leading stockholder and supplier of high-performance engineering materials to the global motorsport sector. We are supply partners in a range of specialist motorsport markets including **Formula 1, Formula E, NASCAR, MOTO GP, WEC & WRC.**

Further technical data available on the reverse of this Datasheet

SHP 6246 Ultimate

Chemical Composition

Weight (%)	Al	Zr	Sn	Mo	Fe	O	C	N	H	Y	Each	Total
Min.	5.5	3.5	1.75	5.50								
Max.	6.5	4.5	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	Elong. A4 in %	Traverse Direction Rm in MPa	Rp 0.2 MPa	Elong. A4 in %
6246	12.7 - 63.5	1172	1103	10	1172	1103	8
6246	63.5 - 76.2				1138	1069	6
6246	76.2 - 101.6				1103	1034	6

Minimum Guaranteed Mechanical Properties for SHP 6246 Ultimate

Alloy	Round Bar Dia (mm)	Longitudinal Direction Rm in MPa	Rp 0.2 Mpa	Elong. A4 in %	Traverse Direction Rm in MPa	Rp 0.2 MPa	Elong. 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**

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When you purchase high-performance materials from **Smiths High Performance**, you will be joining 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 allows us to offer services which are otherwise unavailable in this market sector.

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