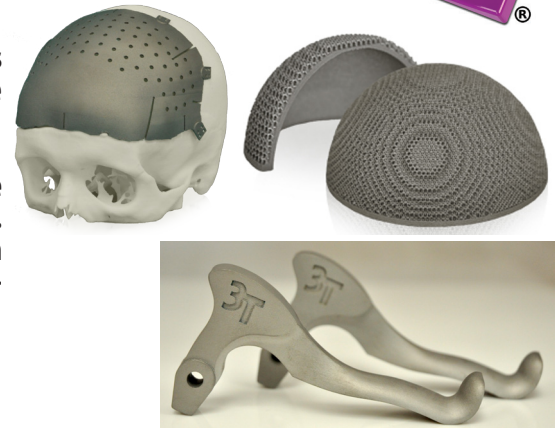


Material Specification

Titanium Alloy Ti6Al4V

Application: This is a pre-alloyed Ti6Al4V alloy. This well-known light alloy is characterised by having excellent mechanical properties and corrosion resistance combined with low specific weight and biocompatibility.

This material is ideal for many high-performance engineering applications, for example in aerospace and motor racing, and also for the production of biomedical implants. Parts built in Ti6Al4V fulfill the requirements of ASTM F1472 regarding maximum concentration of impurities. Parts can be machined, spark-eroded, welded, micro shot-peened, polished and coated if required.



- Typical applications:**
- Direct manufacture of functional prototypes, small series products, individualised products or spare parts
 - Parts requiring a combination of high mechanical properties and low specific weight, e.g. structural and engine components for aerospace and motor racing applications, etc.
 - Biomedical implants

Physical and Chemical Properties:			
Relative Density with Standard Parameters		approx. 100% (4.41 g/cm ³)	
Material composition	Ti balance Al 5.5-6.75 wt% V 3.5-4.5 wt%	O <2000ppm N <500ppm C <800ppm	H <150ppm Fe <3000ppm
Mechanical Properties:			
		After standard heat treatment cycle Ti_6_4_C	
Tensile Strength	- horizontal direction (XY) - vertical direction (Z)	typ. 1050 MPa ± 20 MPa typ. 1060 MPa ± 20 MPa	
Yield strength (Rp 0.2%)	- horizontal direction (XY) - vertical direction (Z)	typ. 1000 MPa ± 20 MPa typ. 1000 MPa ± 20 MPa	
Elongation at break	- horizontal direction (XY) - vertical direction (Z)	typ. 14 ± 1% typ. 15 ± 1%	
Modulus of elasticity	- horizontal direction (XY) - vertical direction (Z)	typ. 116 GPa ± 10 GPa typ. 114 GPa ± 10 GPa	
Thermal Properties:			
Maximum operating temperature		approx. 350°C	

For further technical information or to obtain a quotation for your parts, please contact us on +44 (0)1635 580284 or email your 3D CAD data to enquiries@3trpd.co.uk

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