

Material Specification

Commercially Pure Titanium TiCP

Application: 3TTiCP is commercially pure titanium. This well-known light metal is characterised by ductility and corrosion resistance combined with low specific weight and biocompatibility.

This material is ideal for many high-performance engineering applications, for example for aerospace, the chemical industry, offshore applications and production of biomedical implants. 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 good mechanical properties, low weight and corrosion resistance, eg. ducting, tanks, shields, reaction vessels, brackets etc.
 - Biomedical implants



Physical and Chemical Properties:		
Relative Density with Standard Parameters	approx. 100% (4.5 g/cm ³)	
Material composition	Ti balance	N ≤ 0.03 wt%
	C ≤ 0.08 wt%	H ≤ 0.015 wt%
	O ≤ 0.25 wt%	Fe ≤ 0.3 wt%
Mechanical Properties:		
		After standard heat treatment cycle HT_TiCP
Tensile Strength	- horizontal direction (XY)	typ. 460 MPa ± 20 MPa
Yield strength (Rp 0.2%)	- horizontal direction (XY)	typ. 384 MPa ± 20 MPa
Elongation at break	- horizontal direction (XY)	typ. 19 ± 2%
Modulus of elasticity	- horizontal direction (XY)	typ. 98 GPa ± 15 GPa
Thermal Properties:		
Maximum operating temperature	n/a	

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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