

Ti6-4

SPECIFICATIONS

EU Ti-6Al-4V

USA UNSR56400

MATERIAL DESCRIPTION

- Titanium alloy with good mechanical properties up to 300°C. Titanium alloy alpha + beta type.

COMPOSITION

% massique

Ti	————	Balance
Al	————	6
V	————	4
O2	————	0,2
C	————	<0,08

APPLICATIONS



MATERIAL SHEET

Typical mechanical properties

The data provided in this document represent typical but not guaranteed values.

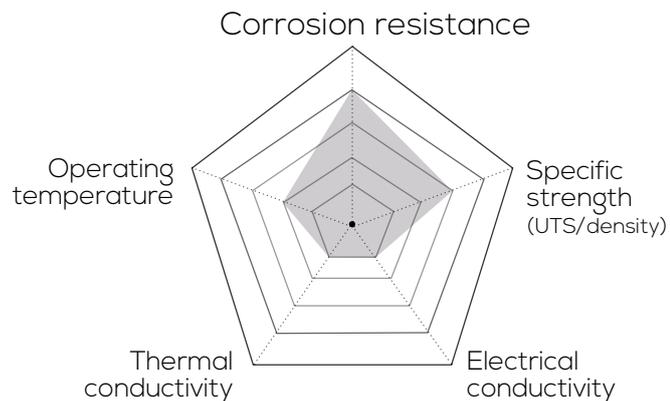
	Stress-relieved	Heat treated*
Ultimate Tensile Strength UTS, MPa	1150	980
Yield Strength YS, MPa	1070	860
Elongation at break E 5D, %	10	15

* Heat treatment: 920°C/2h.

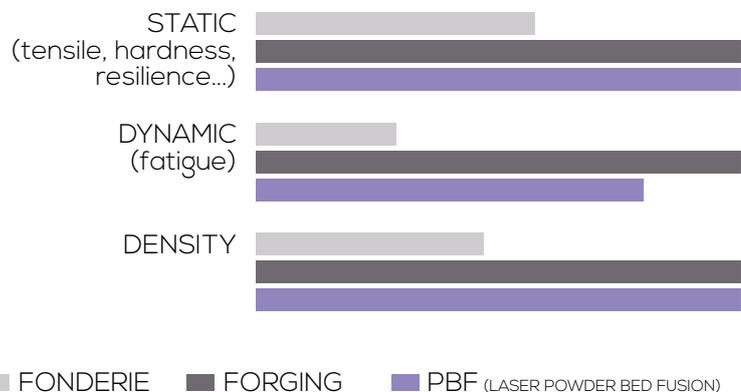
The mechanical characteristics along the Z axis are lowered by about 100 MPa after manufacturing.

The anisotropy is significantly reduced, if not eliminated, after heat treatment.

Physical properties



Qualitative comparison according to processes



Technical data

PARTICULES SIZE :

Available in different granulometries.

SUPPLIERS :

AddUp will provide support with your choice of powder supplier.

Applications, in detail



INDUSTRY

Tubing

Ti6-4 has a very good resistance against corrosion. It can be used in corrosive environments such as water, sea water, or natural streams.

Main applications would be in tubing, nozzles, and valve bodies.



AERONAUTIC

Sub-assembly

Its good mechanical properties and its specific strength (UTS/density) make Ti6-4 commonly used for aeronautic structures like longeron, external doors safety parts or fasteners in ambient or warm atmospheres (<300°C).



POWER GENERATION

Land-based turbine

For land-based turbines, Ti6-4 is used in cold sections (<300°C) to reduce the mass of rotating parts like disks or blades.



LUXURY

Watch

The compromise between lightness and hardness makes Ti6-4 (Titanium grade 5) useful for watch cases and/or wrist strap.

Its low density (4.5) reduces the mass of the watch and while retaining its level of hardness to be scratchresistant.