

Ti6Al4V

Ti6Al4V is a titanium alloy widely known and used in the additive manufacturing industry. It combines high strength, hardness, and ductility with high corrosion resistance. It also means a 45% weight reduction compared to conventional steel.

The most common applications are within aerospace, but Ti6Al4V is also used in marine, automobile, energy, chemical and biomedical industries.

COMPOSITION - TYPICAL VALUES

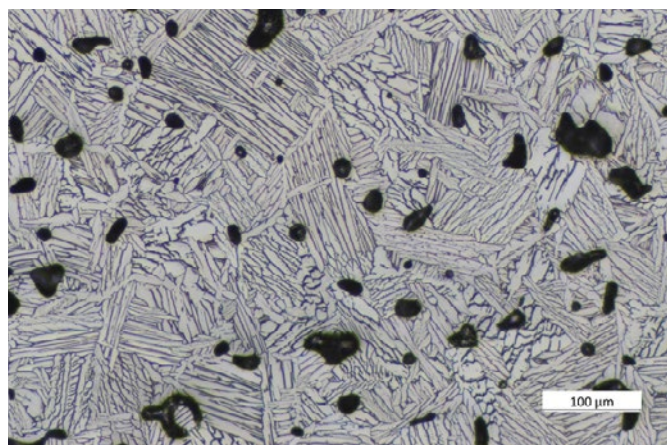
Element	[weight %]
Ti	Balance
Al	6
V	4
C	0,05
N	0,01
O	0,26

Related standards and denominations: ISO22068 (2014)

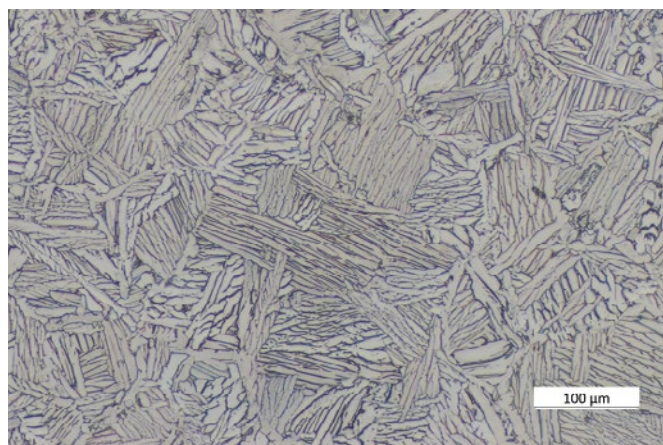
PHYSICAL PROPERTIES - TYPICAL VALUES

Property	As Sintered	As HIP *
Ultimate tensile strength [MPa]	890	1050
Yield strength [MPa]	790	940
Elongation [%]	8	10
Hardness [HRC]	25	55
Relative density [%]	95	Full

* HIP = Hot Isostatic Pressing



As Sintered



HIP: 820 °C; 2000 bar; 2 h

FEATURES

- High strength and hardness
- Excellent corrosion resistance
- 45% lighter than conventional steel
- Biocompatible