

Titanium Alloy TA6V ELI Ti-6Al-4V

SPECIFICATIONS

UNS: R56401

TYPICAL MECHANICAL PROPERTIES

- Annealed condition:
- Tensile test at ambient temperature:
 - UTS:
- 0.2 % Yield strength:
- Elongation (5d):
- 860 N/mm² 790 N/mm²
- 10 %

COMPOSITION

Aluminum	6.00
Vanadium	4.00
Oxygen	<0.13
Carbon	<0.08
Iron	<0.25
Nitrogen	<0.05
Titanium	Base

APPLICATIONS

- Aerospace industry, structural parts
- Chemical and mechanical industries

CHARACTERISTICS

• Alpha-beta type titanium alloy.

HEAT TREATMENT

- Anneal (Normally this alloy is used in the annealed condition):
 - Heat to 700/750 °C
 - Hold 2 or 4 hours depending on section
 - Air cool

PHYSICAL PROPERTIES

• Density: 4.42

- Mean coefficient of expansion in m/m.°C:
 - between 20°C and 200°C: 9.0×10^{-6}
- Modulus of elasticity in N/mm²:

- at 20°C: 110 x 10⁻³

• Thermal conductivity in W.m/m².°C:

- at 20°C: 6.7

- Critical points:
 - Beta Transus: 980°C

Forging _____

 Breakdown temperature: 	1050°C - 1100°C
• Finishing temperature:	850°C - 950°C

Contact:

www.aubertduval.com

The data provided in this document represent typical or average values rather than maximum or minimum guaranteed values. The applications indicated for the grades described are given as guidance only in order to help the reader in his personal assessment. Please note that these do not constitute a guarantee whether implicit or explicit as to whether the grade selected is suited to specific requirements. Aubert & Duval's liability shall not under any circumstances extend to product selection or to the consequences of that selection.