



Titanium Alloy **TA6V ELI** Ti-6Al-4V

Previous brand name: TITAL 318 ELI

SPECIFICATION

UNS: R56401

MECCHANICAL PROPERTIES

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

COMPOSITION

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

APPPLICATIONS

- Aerospace industry.
- Chemical and medical 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 to 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: 9×10^{-6}
- Modulus of elasticity in N/mm²:
 - at 20°C: 110×10^3
- Thermal conductivity in W.m/m².°C:
 - at 20°C: 6.7
- Critical point:
 - Beta Transus: 980°C

FORGING

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

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