

Titanium 6AL-4V

Titanium is extensively used in the aerospace industry and increasingly used in general engineering applications especially where high strength/weight ratio and corrosion resistance are major considerations.

Titanium also offers ready weldability and machinability, fire and shock resistance, favourable cryogenic properties and bio-compatibility.

Applications include pumps and valves, turbines and airframes,

fasteners, automotive components including valves, springs and connecting rods, orthopaedic implants and surgical instruments, oilfield equipment, stress joints, risers and casings.

Titanium 6Al-4V is a high-strength, alpha-beta alloy which is fully heat-treatable and is the most versatile of the titanium alloys.

Technical Data

Nominal Composition by Percent

| | Al | V | C | Fe | O | N | H | Ti |
|-----|------|------|------|------|------|------|--------|-----|
| Min | 5.50 | 3.50 | - | - | - | - | - | - |
| Max | 0.35 | 4.50 | 0.08 | 0.30 | 0.20 | 0.05 | 0.0125 | Bal |

Typical Mechanical Properties (Oil patch)

| Min Tensile Strength | Min Yield Strength | Min Elongation 4D | Min ROA | Hardness Rc |
|----------------------|--------------------|-------------------|---------|--------------|
| 897 MPa (130 ksi) | 827 MPa (120 ksi) | 10% | 25 | Typically 36 |

Certified to: ASTM B348 Gr.5 AMS 4928 BS 2TA11 BS 7252:Pt 3 (for surgical implants)

Equivalent to: DIN 3.7165 AFNOR TA 6V UNS R56400