

Ti6AI4V

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.



| Element | [Weight %] | |
|---------|------------|--|
| Ti | Balance | |
| Al | 6 | |
| V | 4 | |
| С | 0.05 | |
| N | 0.01 | |
| 0 | 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 |

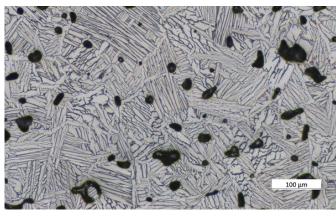
^{*} Hot Isostatic Pressing



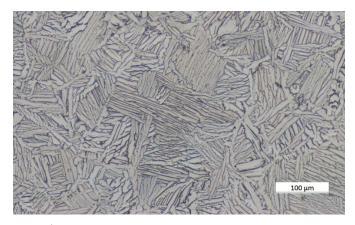


FEATURES

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







HIP: 820 °C; 2000 bar; 2 h

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