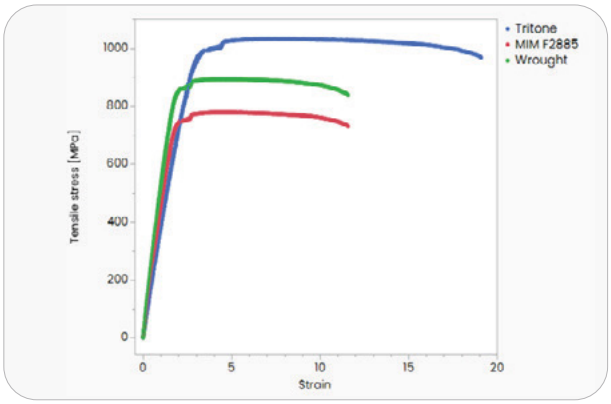
MATERIAL DATASHEET

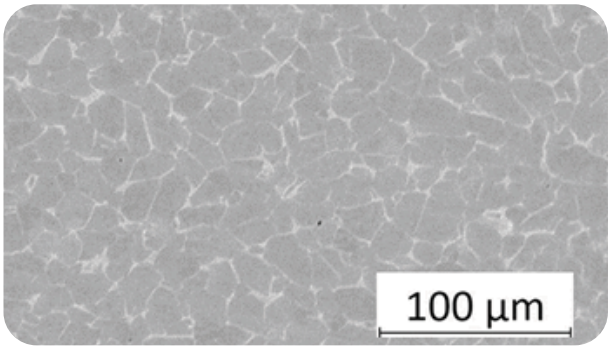
TITANIUM 6AL-4V

Large Container: 50-MTLP-0006 | Small Container: 50-MTLP-1006

COMPOSITION (ASTM B348/F2885)

Composition	Amount
Aluminum	5.50-6.75%
Vanadium	3.50-4.50%
Carbon	0.08%max
Oxygen	<0.25% max
Iron	0.30%
Titanium	Bal.





MECHANICAL PROPERTIES

Properties	Test Standard	Tritone	MIM ISO F2885	MIM ISO 22068	Wrought ASTM B348
Ultimate Tensile Strength	ASTM E8	960 MPa	780 Mpa	800 Mpa	895 MPa
0.2% Yield Strength	ASTM E8	890 MPa	680 Mpa	600 Mpa	828 MPa
Elongation at Break	ASTM E8	14%	10%	3%	10%
Relative density	ASTM B962	97%	96%	95%	100%

The mechanical properties are typical values obtained by independent laboratory from parts processed in an industrial sintering furnace.

MATERIAL APPLICATION

Titanium 6Al-4V (Grade 5) offers an exceptional combination of strength, low weight, and corrosion resistance. Its properties make it ideal for demanding applications in aerospace, medical devices, and advanced engineering.

Combined with MoldJet®, this alloy unlocks new levels of design freedom and manufacturing efficiency—enabling the production of lightweight, complex parts at scale without compromising mechanical performance or surface quality.

Luxury & Fashion

MoldJet Success Factors:

- Superior material that can be polished!
- Any shape, No support!
- Precious metals compatibility
- paste deposition as required per part and no need for extra material

Ti6L4V

216 parts in 60 hours

42x51x6 mm

Medical Devices

Challenge:
Producing a hollow, air-tight, two-part knee arthroscopy tool at 1,000 sets/week on a single Dominant machine.
Competition:
Went head-to-head with CNC technology.
Success:

- 50% weight reduction via hollow structure
- 4× productivity over competing methods

Ti6L4V

61 parts in 3.5 hours

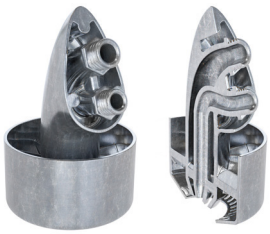
104x78x5

Aerospace & Defense

Challenge:

- Multiple configurations
- Yearly batch size of 30,000 of parts

Competition:
Competed against LPBF & Binder-jet
Success:
Improved design capability of inner tunnels



Ti6L4V

240 parts in 106 hours

44x40x64 mm