Ta

www.taniobis.com

AMtrinsic®

AMtrinsic® spherical Ta powder

Powders with the highest degree of processability

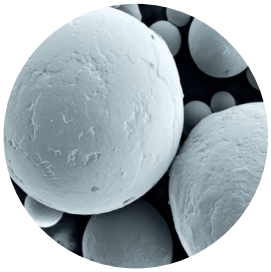
TANIOBIS has unparalleled expertise in developing and manufacturing tantalum and niobium metals. Based on the unique knowledge of these core competencies, TANIOBIS is now able to offer an **gas-atomized AMtrinsic® spherical Ta powder** for use in various Additive Manufacturing Technologies. Our powder is characterized by very good flowability, high tap density, spherical shape and narrow particle size distribution. **AMtrinsic® spherical Ta powders** are pre-conditioned for applications in Laser Beam Powder Bed Fusion (LB-PBF), Electron Beam Powder Bed Fusion (EB-PBF) and Directed Energy Deposition (DED) or according to customer requests.

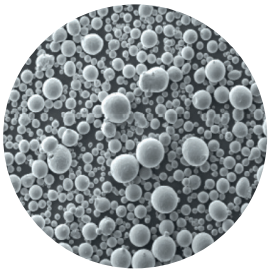
AMtrinsic® spherical Ta powder

Tantalum exhibits outstanding properties such as high strength, high ductility, excellent corrosion resistance and biocompatibility providing unique possibilities for application in aerospace, medical, nuclear, and chemical industries.

Physical properties	Unit	15 - 63 µm	63 - 105 µm
Tap density	g/cm³	>9	>9
Flow rate/ 50g 0.1 inch 0.2 inch	s	<12 <3	<12 <3
D_{10}	µm	15-30	50-65
D_{50}	µm	30-45	65-85
D_{90}	µm	45-65	85-110

AMtrinsic® spherical Tantalum





TANIOBIS
inspiring metal evolution

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Chemical characteristics	Unit	Value
Ta		Bal.
C	ppm	<50
H	ppm	<50
N	ppm	<100
O	ppm	<400
Nb	ppm	<500
Cr	ppm	<100
Fe	ppm	<100
Ni	ppm	<100
Hf	ppm	<100
Mo	ppm	<100
Zr	ppm	<100
W	ppm	<100

*Customer specification upon request.

Low O content powder as a unique feature

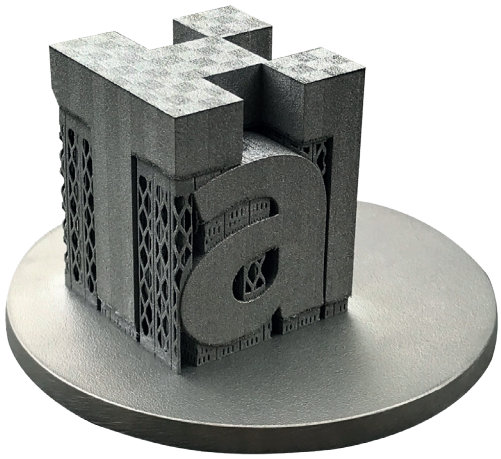
To achieve the best properties in printed parts, high purity and low oxygen content are essential requirements. With our unique technology, we are able to provide spherical Ta powder with O content below 400 ppm.
Upon request we can provide powders with ultra low oxygen content.

Typical properties of AMtrinsic® Ta L-PBF printed parts

Mechanical properties	Unit	As-printed*
Ultimate strength	MPa	571
Rp1.0	MPa	562
Failure strain	%	22
Hardness	HV30	213

*The mechanical test method in accordance to ASTM E8

3D-printed Tantalum spinal cage implant



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