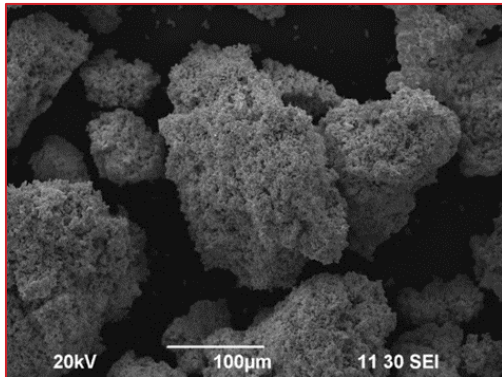


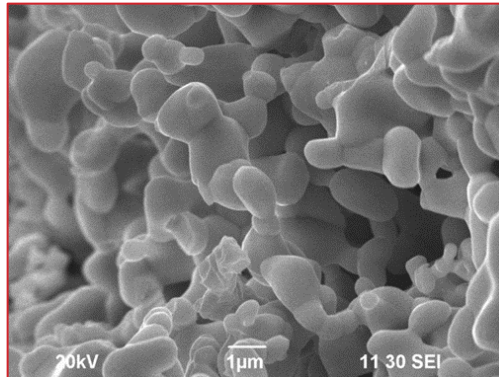
Metalysis Tantalum Product Portfolio

CAPACITOR GRADE POWDER



low magnification image of loose capacitor grade powder

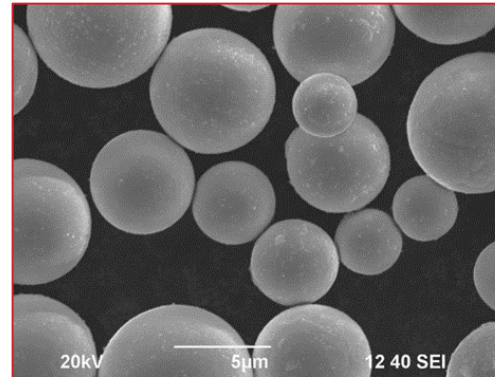
- Capacitor grade tantalum powder is available in a variety of kCV/g, typically from 10kCV/g upwards.
- The proprietary Metalysis technology creates the microstructure during conversion of the tantalum oxide directly to metal powder, circumventing additional processing steps associated with incumbent routes.



high magnification image of loose capacitor grade powder

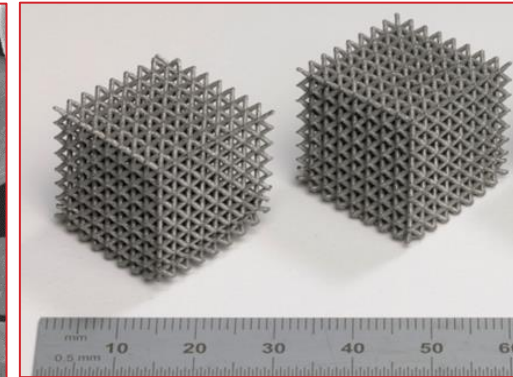
- Applications for capacitor grade tantalum powders include medical appliances, automotive components and portable electronics.

SPHERICAL GRADE POWDER



high magnification image of loose spherical grade powder

- Spherical tantalum powder of various particle size distributions, ranging from 5 to 100µm. The material has been used to additively manufacture lattice structures, with particular emphasis on bio-medical applications.

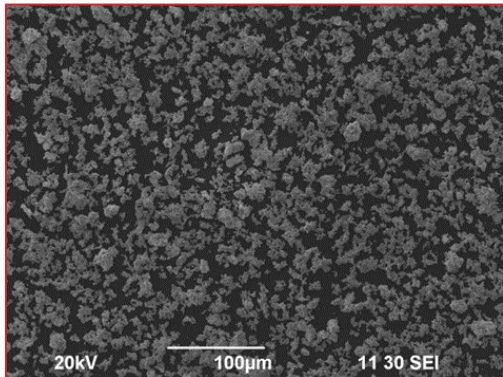


additively manufactured tantalum lattice structures

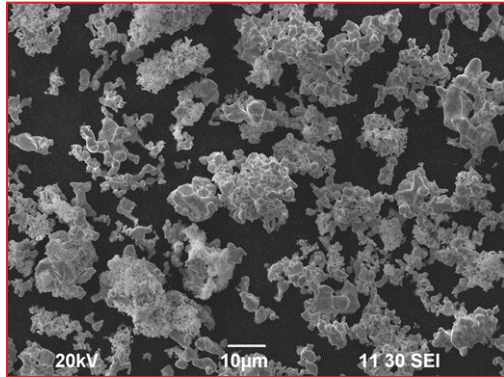
- Spherical tantalum powder lends itself to a range of additive manufacturing techniques such as EBM (Electron Beam Melting), SLM (Selective Laser Melting) and LMD (Laser Metal Deposition).

Metalysis Tantalum Product Portfolio

METALLURGICAL GRADE POWDER

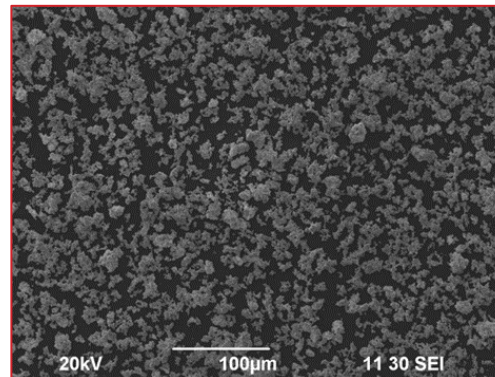


low magnification image of loose metallurgical grade powder



high magnification image of loose metallurgical grade powder

METALLURGICAL GRADE COMPACTS



feedstock tantalum powder for metallurgical grade compacts



press and sintered metallurgical grade tantalum compacts

- Metallurgical grade tantalum powder is available in a range of purities, in particle sizes from 5 to 100µm.
- The proprietary Metalysis process creates a powder exhibiting a unique porous structure, different to the fully dense morphology associated with more traditional routes.

- Can be used in various Powder Metallurgy techniques such as HIP (Hot iso-static Pressing), FAST (Field Assisted Sintering Technology), MIM (Metal Injection Molding), or GDCS (Gas Dynamic Cold Spray) to fabricate near-net shape parts. The latter can also be employed to deposit coatings – utilizing tantalum’s excellent corrosion resistance.

- Metallurgical grade compacts are available in a range of chemical purities and geometries, via the press and sintering of tantalum powder.

- The primary use of metallurgical grade tantalum compacts, is as an additive for nickel-based superalloys. These are typically associated with high temperature applications such as turbines in aerospace and power generation, or rocket nozzles for the space sector.