

Material Data Sheet: Tantalum

Tantalum (Ta)

Version 1.2, Last Updated: 11/21/2025

1. Identification and Purity

Trade Name / Abbreviation	Ta
Chemical Formula	Ta
SCI Part Number	X073000XXXXZ00
Purity	99.95% & 99.99% Grades Available

2. Physical and Mechanical Properties

Property	Value	Measurement / Units
Density (Bulk)	16.65	g/cm ³
Density (Sintered)	—	g/cm ³
Melting / Sublimation	3,017	°C / °F
Hardness	6.5	Mohs Scale
Mechanical Stress / Modulus	170–300MPa	MPa / GPa
Band Gap / Electrical Type	—	eV / Semimetal
Configuration	Planar & Rotary	Target Type
Backing Plate Compatibility	Planar: Copper (Cu) or Molybdenum (Mo) / Rotary: Stainless Steel	Compatibility Notes
General Comments	Refractory metal with high corrosion resistance.	—

SCI Engineered Materials
2839 Charter Street | Columbus, Ohio, 43228
Phone: 614-486-0261 | Fax: 614-486-0912
Email: sales@sciengineeredmaterials.com