Titanium Sputtering Target

Titanium sputtering target for PVD processes delivering uniform coatings with strong adhesion and corrosion resistance. **SKU:** 1000024295-group
Product Code: TI00-ST-000100

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	22
Crystal structure	Hexagonal close packed
Electronic structure	Ar $3d^2$ $4s^2$
Valences shown	2,3,4
Atomic weight(amu)	47.88
Thermal neutron absorption cross-section(Barns)	6.1
Photo-electric work function(eV)	4.1
Natural isotope distribution(Mass No./%)	50/ 5.3
Natural isotope distribution(Mass No./%)	49/ 5.5
Natural isotope distribution(Mass No./%)	46/ 8.0
Natural isotope distribution(Mass No./%)	48/ 73.7
Natural isotope distribution(Mass No./%)	47/ 7.5
Atomic radius - Goldschmidt(nm)	0.147
Ionisation potential(No./eV)	3/ 27.5
Ionisation potential(No./eV)	4/ 43.3
Ionisation potential(No./eV)	5/ 99.2
Ionisation potential(No./eV)	1/ 6.82
Ionisation potential(No./eV)	2/ 13.6
Ionisation potential(No./eV)	6/ 119

Mechanical Properties

Element	Value
Material condition	Polycrystalline
Material condition	Annealed
Poisson's ratio	0.361

Element	Value
Poisson's ratio	0.361
Poisson's ratio	-
Bulk modulus(GPa)	108.4
Bulk modulus(GPa)	-
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Tensile modulus(GPa)	-
Tensile modulus(GPa)	120.2
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Izod toughness(J m?¹)	61
Izod toughness(J m?¹)	61
Hardness - Vickers(kgf mm?²)	60
Hardness - Vickers(kgf mm?²)	60
Tensile strength(MPa)	230-460
Tensile strength(MPa)	230-460
Yield strength(MPa)	140-250
Yield strength(MPa)	140-250

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	54@20°C
Superconductivity critical temperature(K)	0.4
Temperature coefficient(K?¹)	0.0038@0-100°C

Physical Properties

Element	Value
Boiling point(C)	3287
Density(gcm?³)	4.5@20°C

Thermal Properties

Element	Value
Melting point(C)	1660
Latent heat of evaporation(J g?¹)	8893
Latent heat of fusion(J g?¹)	365
Specific heat(J K?¹ kg?¹)	523@25°C
Thermal conductivity(W m?¹ K?¹)	21.9@0-100°C
Coefficient of thermal expansion(x10?? K?¹)	8.9@0-100°C