Osmium Powder

Formula: Os
Percentage Purity: 99.9%
Maximum Particle Size: 500µm
Weight: 250g
CAS Number: 7440-04-2
UOM Code: 143-512-17
SKU: 1000045764-group
Product Code: OS00-PD-000110

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	76
Crystal structure	Hexagonal close packed
Electronic structure	Xe 4f¹? 5d? 6s²
Valences shown	0, 1, 2, 3, 4, 5, 6, 7, 8
Atomic weight(amu)	190.2
Thermal neutron absorption cross-section(Barns)	15.3
Photo-electric work function(eV)	4.8
Natural isotope distribution(Mass No./%)	192/ 41.0
Natural isotope distribution(Mass No./%)	184/ 0.02
Natural isotope distribution(Mass No./%)	187/ 1.6
Natural isotope distribution(Mass No./%)	189/ 16.1
Natural isotope distribution(Mass No./%)	186/ 1.58
Natural isotope distribution(Mass No./%)	188/ 13.3
Natural isotope distribution(Mass No./%)	190/ 26.4
Atomic radius - Goldschmidt(nm)	0.135
Ionisation potential(No./eV)	Feb-16
Ionisation potential(No./eV)	1/ 8.7

Mechanical Properties

Element	Value
Material condition	Soft

Element	Value
Material condition	Hard
Poisson's ratio	0.25
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Bulk modulus(GPa)	373
Bulk modulus(GPa)	373
Tensile modulus(GPa)	559
Tensile modulus(GPa)	559
Hardness - Vickers(kgf mm?²)	300-350
Hardness - Vickers(kgf mm?²)	670-1000

Electrical Properties

Element	Value
Electrical resistivity(µOhmcm)	8.8@20@20°C
Superconductivity critical temperature(K)	0.66
Temperature coefficient(K?¹)	0.0041@0-100°C

Physical Properties

Element	Value
Boiling point(C)	5027
Density(gcm?³)	22.5@20°C

Thermal Properties

Element	Value
Melting point(C)	3045
Latent heat of evaporation(J g?¹)	3305
Latent heat of fusion(J g?¹)	154
Specific heat(J K?¹ kg?¹)	131@25
Thermal conductivity(W m?¹ K?¹)	87.6@0-100°C
Coefficient of thermal expansion(x10?? K?¹)	4.57@0-100