Zirconium Pellets (Hf > 0.2%)

Hafnium (>0.2% zirconium) pellets supply controlled feedstock for alloying, deposition, and neutron?absorbing systems. **SKU:** 1000001017-group
Product Code: ZR00-LP-000155

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	40
Crystal structure	Hexagonal close packed
Electronic structure	Kr $4d^2$ $5s^2$
Valences shown	2,3,4
Atomic weight(amu)	91.22
Thermal neutron absorption cross-section(Barns)	0.182
Photo-electric work function(eV)	3.8
Natural isotope distribution(Mass No./%)	96/ 2.8
Natural isotope distribution(Mass No./%)	92/ 17.1
Natural isotope distribution(Mass No./%)	91/ 11.2
Natural isotope distribution(Mass No./%)	94/ 17.5
Natural isotope distribution(Mass No./%)	90/ 51.4
Atomic radius - Goldschmidt(nm)	0.16
Ionisation potential(No./eV)	4/ 34.34
Ionisation potential(No./eV)	Jun-99
Ionisation potential(No./eV)	2/ 13.13
Ionisation potential(No./eV)	1/ 6.84
Ionisation potential(No./eV)	5/ 81.5
Ionisation potential(No./eV)	3/ 22.99

Mechanical Properties

Element	Value
Material condition	Polycrystalline
Material condition	Soft
Poisson's ratio	0.38

Element	Value
Poisson's ratio	0.38
Bulk modulus(GPa)	89.8
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Tensile modulus(GPa)	98
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Hardness - Vickers(kgf mm?²)	85-100
Tensile strength(MPa)	350-390
Yield strength(MPa)	250-310

Electrical Properties

Element	Value
Electrical resistivity(µOhmcm)	44@20°C
Superconductivity critical temperature(K)	0.61
Temperature coefficient(K?¹)	0.0044@0-100°C
Thermal emf against Pt (cold 0C - hot 100C)(mV)	1.17

Physical Properties

Element	Value
Boiling point(C)	4377
Density(gcm?³)	6.49@20°C

Thermal Properties

Element	Value
Melting point(C)	1852
Latent heat of evaporation(J g?¹)	6360
Latent heat of fusion(J g?¹)	211
Specific heat(J K?¹ kg?¹)	281@25°C
Thermal conductivity(W m?¹ K?¹)	22.7@0-100°C
Coefficient of thermal expansion(x10?? K?¹)	5.9@0-100°C