

Iridium Thin Film Disk

Formula: Ir

Percentage Purity: 99.9%

Thickness: 0.1 μ m

Diameter: 10mm

Area Density: 224 μ g/cm²

Support: Permanent Mylar® 3.5 μ m

CAS Number: 7439-88-5

UOM Code: 636-983-05

SKU: 1000125094-group

Product Code: IR00-MF-000100

Material Properties for Precious Metals

Atomic Properties

Element	Value
Atomic number	77
Crystal structure	Face centred cubic
Electronic structure	Xe 4f ¹⁴ 5d ⁷ 6s ²
Valences shown	3, 4
Atomic weight(amu)	192.22
Thermal neutron absorption cross-section(Barns)	425
Photo-electric work function(eV)	4.6
Natural isotope distribution(Mass No./%)	191/ 37.3
Natural isotope distribution(Mass No./%)	193/ 62.7
Atomic radius - Goldschmidt(nm)	0.135

Mechanical Properties

Element	Value
Material condition	Soft
Material condition	Hard
Poisson's ratio	0.26
Poisson's ratio	0.26
Bulk modulus(GPa)	371
Bulk modulus(GPa)	371

Element	Value
Tensile modulus(GPa)	528
Tensile modulus(GPa)	528
Hardness - Vickers(kgf mm ²)	650
Hardness - Vickers(kgf mm ²)	200-300
Tensile strength(MPa)	550-1100
Tensile strength(MPa)	1200

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	5.1@20@20°C
Superconductivity critical temperature(K)	0.11
Temperature coefficient(K ⁻¹)	0.0045@0-100°C
Thermal emf against Pt (cold 0C - hot 100C)(mV)	0.65

Physical Properties

Element	Value
Boiling point(C)	4130
Density(gcm ³)	22.4@20°C

Thermal Properties

Element	Value
Melting point(C)	2410
Latent heat of evaporation(J g ⁻¹)	3186
Latent heat of fusion(J g ⁻¹)	135
Specific heat(J K ⁻¹ kg ⁻¹)	133@25°C
Thermal conductivity(W m ⁻¹ K ⁻¹)	147@0-100°C
Coefficient of thermal expansion($\times 10^{-6}$ K ⁻¹)	6.8@0-100°C