

Iridium Rod

Formula: Ir

Percentage Purity: 99.9%

Diameter: 5mm

Length: 25mm

Temper: As Drawn

CAS Number: 7439-88-5

UOM Code: 009-026-29

SKU: 1000001267-group

Product Code: IR00-RD-000138

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
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Bulk modulus(GPa)	371
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Tensile modulus(GPa)	528

Element	Value
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