

Molybdenum Disk

Formula: Mo

Percentage Purity: 99.9%

Temper: Annealed

Thickness: 0.125mm

Diameter: 15mm

CAS Number: 7439-98-7

UOM Code: 004-397-70

SKU: 1000000569-group

Product Code: MO00-FL-000330

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	42
Crystal structure	Body centred cubic
Electronic structure	Kr 4d ⁵ 5s ¹
Valences shown	2, 3, 4, 5, 6
Atomic weight(amu)	95.94
Thermal neutron absorption cross-section(Barns)	2.65
Photo-electric work function(eV)	4.2
Natural isotope distribution(Mass No./%)	95/ 15.9
Natural isotope distribution(Mass No./%)	96/ 16.7
Natural isotope distribution(Mass No./%)	98/ 24.1
Natural isotope distribution(Mass No./%)	97/ 9.6
Natural isotope distribution(Mass No./%)	92/ 14.8
Natural isotope distribution(Mass No./%)	94/ 9.3
Natural isotope distribution(Mass No./%)	100/ 9.6
Atomic radius - Goldschmidt(nm)	0.14
Ionisation potential(No./eV)	2/ 16.15
Ionisation potential(No./eV)	5/ 61.2
Ionisation potential(No./eV)	68
Ionisation potential(No./eV)	1/ 7.10
Ionisation potential(No./eV)	3/ 27.2

Element	Value
Ionisation potential(No./eV)	4/ 46.4

Mechanical Properties

Element	Value
Material condition	Hard
Material condition	Soft
Poisson's ratio	0.293
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Bulk modulus(GPa)	261.2
Bulk modulus(GPa)	261.2
Tensile modulus(GPa)	324.8
Tensile modulus(GPa)	324.8
Hardness - Vickers(kgf mm ²)	250
Hardness - Vickers(kgf mm ²)	200
Tensile strength(MPa)	485-550
Tensile strength(MPa)	620-690
Yield strength(MPa)	550
Yield strength(MPa)	415-450

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	5.7@20@20°C
Superconductivity critical temperature(K)	0.915
Temperature coefficient(K ⁻¹)	0.00435@0-100°C
Thermal emf against Pt (cold 0C - hot 100C)(mV)	1.45

Physical Properties

Element	Value
Boiling point(C)	4612
Density(gcm ³)	10.22@20°C

Thermal Properties

Element	Value
Melting point(C)	2617
Latent heat of evaporation(J g ⁻¹)	6153
Latent heat of fusion(J g ⁻¹)	290
Specific heat(J K ⁻¹ kg ⁻¹)	251@25°C
Thermal conductivity(W m ⁻¹ K ⁻¹)	138@0-100°C

Element	Value
Coefficient of thermal expansion($\times 10^{-6} \text{ K}^{-1}$)	5.1@0-100°C