

Lead Disk

Formula: Pb

Percentage Purity: 99.95%

Temper: As Rolled

Thickness: 0.25mm

Diameter: 8mm

CAS Number: 7439-92-1

UOM Code: 004-238-29

SKU: 1000000541-group

Product Code: PB00-FL-000181

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	82
Crystal structure	Face centred cubic
Electronic structure	Xe 4f ¹⁴ 5d ¹⁰ 6s ² 6p ²
Valences shown	2, 4
Atomic weight(amu)	207.2
Thermal neutron absorption cross-section(Barns)	0.18
Photo-electric work function(eV)	4
Natural isotope distribution(Mass No./%)	207/ 22.1
Natural isotope distribution(Mass No./%)	208/ 52.4
Natural isotope distribution(Mass No./%)	206/ 24.1
Natural isotope distribution(Mass No./%)	204/ 1.4
Atomic radius - Goldschmidt(nm)	0.175
Ionisation potential(No./eV)	5/ 68.8
Ionisation potential(No./eV)	3/ 31.9
Ionisation potential(No./eV)	4/ 42.3
Ionisation potential(No./eV)	2/ 15.03
Ionisation potential(No./eV)	1/ 7.42

Mechanical Properties

Element	Value
---------	-------

Hardness - Mohs	1.5
Material condition	Polycrystalline
Material condition	Sand cast
Poisson's ratio	0.44
Poisson's ratio	0.44
Bulk modulus(GPa)	45.8
Bulk modulus(GPa)	45.8
Tensile modulus(GPa)	16.1
Tensile modulus(GPa)	16.1
Tensile strength(MPa)	12
Yield strength(MPa)	5.5

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	20.6@20@20°C
Superconductivity critical temperature(K)	7.196
Temperature coefficient(K^{-1})	0.0042@0-100°C
Thermal emf against Pt (cold 0C - hot 100C)(mV)	0.44

Physical Properties

Element	Value
Boiling point(C)	1740
Density(gcm^{-3})	11.35@20

Thermal Properties

Element	Value
Melting point(C)	327.5
Latent heat of evaporation(J g^{-1})	862
Latent heat of fusion(J g^{-1})	23.2
Specific heat($\text{J K}^{-1} \text{kg}^{-1}$)	159@25°C
Thermal conductivity($\text{W m}^{-1} \text{K}^{-1}$)	35.3@0-100°C
Coefficient of thermal expansion($\times 10^{-6} \text{K}^{-1}$)	29@0-100°C