Cobalt Foil

Formula: Co
Percentage Purity: 99.8%
Thickness: 0.0125mm
Length 1: 50mm
Length 2: 50mm
CAS Number: 7440-48-4
UOM Code: 003-770-29
SKU: 1000000499-group
Product Code: CO00-FL-000260

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	27
Crystal structure	Hexagonal close packed
Electronic structure	Ar 3d? 4s²
Valences shown	2, 3
Atomic weight(amu)	58.9332
Thermal neutron absorption cross-section(Barns)	37.5
Photo-electric work function(eV)	5
Atomic radius - Goldschmidt(nm)	0.125
Ionisation potential(No./eV)	2/ 17.06
Ionisation potential(No./eV)	4/ 51.3
Ionisation potential(No./eV)	3/ 33.5
Ionisation potential(No./eV)	1/ 79.5
Ionisation potential(No./eV)	1/ 79.5
Ionisation potential(No./eV)	6/ 102

Mechanical Properties

Element	Value
Material condition	Hard
Material condition	Soft
Poisson's ratio	0.32

Element	Value
Poisson's ratio	0.32
Bulk modulus(GPa)	181.5
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Tensile modulus(GPa)	211
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Hardness - Vickers(kgf mm?²)	320
Hardness - Vickers(kgf mm?²)	170
Tensile strength(MPa)	1135
Tensile strength(MPa)	760
Yield strength(MPa)	345-485

Electrical Properties

Element	Value
Electrical resistivity(µOhmcm)	6.34@20@20°C
Temperature coefficient(K?¹)	0.0066@0-100°C
Thermal emf against Pt (cold 0C - hot 100C)(mV)	-1.33

Physical Properties

Element	Value
Boiling point(C)	2870
Density(gcm?³)	8.9@20°C

Thermal Properties

Element	Value
Melting point(C)	1495
Latent heat of evaporation(J g?¹)	6490
Latent heat of fusion(J g?¹)	263
Specific heat(J K?¹ kg?¹)	456@25°C
Thermal conductivity(W m?¹ K?¹)	100@0-100°C
Coefficient of thermal expansion(x10?? K?¹)	12.5@0-100°C