Scandium Foil/Sheet

Scandium foil featuring high strength?to?weight, corrosion resistance, and Al?alloy compatibility. Thin form for layering/coatings in aerospace, fuel cells, and composites; used to reinforce Al alloys and in SOFC membranes.
SKU: 1000088430-group
Product Code: SC00-FL-000105

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	21
Crystal structure	Hexagonal close packed
Electronic structure	Ar $3d^1$ $4s^2$
Valences shown	3
Atomic weight(amu)	44.9559
Thermal neutron absorption cross-section(Barns)	25
Photo-electric work function(eV)	3.5
Atomic radius - Goldschmidt(nm)	0.16
Ionisation potential(No./eV)	3/ 24.8
Ionisation potential(No./eV)	5/ 91.7
Ionisation potential(No./eV)	4/ 73.5
Ionisation potential(No./eV)	6/ 111
Ionisation potential(No./eV)	1/ 6.54
Ionisation potential(No./eV)	2/ 12.8

Mechanical Properties

Element	Value
Hardness - Brinell	78
Hardness - Brinell	136
Material condition	Soft
Material condition	Hard
Poisson's ratio	0.27
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Bulk modulus(GPa)	44.2

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Bulk modulus(GPa)	44.2
Tensile modulus(GPa)	79.3
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Electrical Properties

Element	Value
Electrical resistivity(µOhmcm)	66@20°C
Temperature coefficient(K?¹)	0.00282@0-100°C

Physical Properties

Element	Value
Boiling point(C)	2831
Density(gcm?³)	2.99@20°C

Thermal Properties

Element	Value
Melting point(C)	1541
Latent heat of evaporation(J g?¹)	7293
Latent heat of fusion(J g?¹)	357
Specific heat(J K?¹ kg?¹)	557@25°C
Thermal conductivity(W m?¹ K?¹)	15.8@0-100°C
Coefficient of thermal expansion(x10?? K?¹)	12@0-100°C