Nickel Spooled Wire

Nickel spooled wire (99–99.99% purity) in multiple tempers. Used for heating elements, springs, battery electrodes and magnetic components. **SKU:** 1000000275-group
Product Code: NI00-WR-000170

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	28
Crystal structure	Face centred cubic
Electronic structure	Ar 3d? $4s^2$
Valences shown	0, 1, 2, 3
Atomic weight(amu)	58.69
Thermal neutron absorption cross-section(Barns)	4.54
Photo-electric work function(eV)	4.9
Natural isotope distribution(Mass No./%)	60/ 26.10
Natural isotope distribution(Mass No./%)	62/ 3.59
Natural isotope distribution(Mass No./%)	61/ 1.13
Natural isotope distribution(Mass No./%)	58/ 68.27
Natural isotope distribution(Mass No./%)	64/ 0.91
Atomic radius - Goldschmidt(nm)	0.125
Ionisation potential(No./eV)	2/ 18.2
Ionisation potential(No./eV)	4/ 54.9
Ionisation potential(No./eV)	6/ 108
Ionisation potential(No./eV)	1/ 7.63
Ionisation potential(No./eV)	3/ 35.2
Ionisation potential(No./eV)	5/ 75.5

Mechanical Properties

Element	Value
Hardness - Brinell	190
Hardness - Brinell	100
Material condition	Hard

Element	Value
Material condition	Soft
Poisson's ratio	0.312
Poisson's ratio	0.312
Bulk modulus(GPa)	177.3
Bulk modulus(GPa)	177.3
Tensile modulus(GPa)	199.5
Tensile modulus(GPa)	199.5
Izod toughness(J m?¹)	160
Izod toughness(J m?¹)	160
Tensile strength(MPa)	400
Tensile strength(MPa)	660
Yield strength(MPa)	150
Yield strength(MPa)	480

Electrical Properties

Element	Value
Electrical resistivity(µOhmcm)	6.9@20°C
Temperature coefficient(K?¹)	0.0068@0-100°C
Thermal emf against Pt (cold 0C - hot 100C)(mV)	-1.48

Physical Properties

Element	Value
Boiling point(C)	2732
Density(gcm?³)	8.9@20
Density(gcm?³)	8.9@20C

Thermal Properties

Element	Value
Melting point(C)	1453
Latent heat of evaporation(J g?¹)	6378
Latent heat of fusion(J g?¹)	292
Specific heat(J K?¹ kg?¹)	444@25°C
Thermal conductivity(W m?¹ K?¹)	90.9@0-100°C
Coefficient of thermal expansion(x10?? K?¹)	13.3@0-100°C