

Cobalt

58.933

Discovered

1735

45

Density STP/Liquid 12450 / 10700
Modulus Bulk/Shear/Young 380 / 150 / 275
Hardness Brinell/Mohs/Vickers 1100 / 6 / 1246
Conductivity Thermal/Electric 150 / 23
Radius Calc. d/Empirical 173 / 135
Radius Covalent/v.d.Waals 135 / 117
Heat Vaporization/Fusion 495 / 217
Specific Heat 240
Melting Point 1964°C/2237K
Boiling Point 3695°C/3968K
Electronegativity 2.28
Electron Affinity 109.7
1st Ionization 719.7
Oxidation States 3
Electron Config [Kr]5s¹ 4d⁸
Electron Shells 2,8,18,16,1
Abundance (Univ.) 6.0×10⁻⁶%
Discovered 1803

Rhodium

102.91

Nickel

58.693

Discovered

1751

46

Density STP/Liquid 12023 / 103
Modulus Bulk/Shear/Young 180 / 44 / 110
Hardness Brinell/Mohs/Vickers 373 / 4.75
Conductivity Thermal/Electric 72 / 10
Radius Calc. d/Empirical 169 / 140
Radius Covalent/v.d.Waals 131 / 163
Heat Vaporization/Fusion 380 / 16.7
Specific Heat 240
Melting Point 1554.9°C/1111K
Boiling Point 2963°C/32
Electronegativity 2.20
Electron Affinity 53.7
1st Ionization 804.4
Oxidation States 2,4
Electron Config [Kr]4d¹⁰
Electron Shells 2,8,18,18
Abundance (Univ.) 2.0×10⁻⁵%
Discovered 1803

Palladium

106.42