

Nickel Plain Weave Gauze

Formula: Ni
Percentage Purity: 99%
Thickness: 0.5mm
Length 1: 100mm
Length 2: 250mm
Product Shape: Plain Weave
Type: Plain Weave
Open Area: 55%
Nominal Aperture: 0.73
Wires/Inch: 26x26
Wire Diameter: 0.25mm
CAS Number: 7440-02-0
UOM Code: 043-915-91
SKU: 1000006103-group
Product Code: NI00-MS-000150

Material Properties for Metals

Atomic Properties

| Element | Value |
|---|------------------------------------|
| Atomic number | 28 |
| Crystal structure | Face centred cubic |
| Electronic structure | Ar 3d ⁸ 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 |

| Element | Value |
|--------------------------------|--------------|
| 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 |
| 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@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 |

| Element | Value |
|---|--------------|
| 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 ⁻⁵ K ⁻¹) | 13.3@0-100°C |