

# Nickel Alloys - Alloy 400

## Round Bar

## Properties

Stock		Chemical Properties	
Size (mm)	Weight (Kg/m)	Element	Chemical Composition %
25	4.33	Carbon (C)	0.30 max
35	8.49	Copper (Cu)	28.0 - 34.0 max
45	14.04	Iron (Fe)	2.5 max
55	20.97	Manganese (Mn)	2.0 max
65	29.29	Nickel (Ni)	63.0 min
75	39.00	Phosphorous (P)	0.030 max
100	69.33	Lead (Pb)	0.005 max
125	108.33	Sulphur (S)	0.024 max
150	156.00	Silicon (Si)	0.5 max

### Mechanical Properties

Property	Value
Ultimate Tensile Strength	480 N/mm <sup>2</sup>
0.2% Proof Stress	170 N/mm <sup>2</sup>
Elongation	35%
Hardness HRC (max)	35

### Physical Properties

Property	Value
Density (Kg/m-1)	88.3
Young's Modulus (N/mm <sup>2</sup> )	179 x 10 <sup>3</sup>
Specific Heat, 20°C	419
Specific Electrical Resistance, 20°C	0.51
Thermal Conductivity, °C	21.8

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