

# Nickel Alloys - Alloy 625

## Round Bar

## Properties

Stock		Chemical Properties	
Diameter (in)	Weight kg/m	Element	Chemical Composition %
1	4.28	Aluminium (Al)	0.40 max
1 1/2	9.62	Carbon (C)	0.10 max
2	17.11	Chromium (Cr)	20.0 - 23.0 max
2 1/2	26.73	Iron (Fe)	5.0 max
3	38.49	Molybdenum (Mo)	8.0 - 10.0 max
3 1/2	52.39	Manganese (Mn)	0.5 max
4	68.43	Nickel (Ni)	58.0 min
5	106.92	Niobium (Nb)	3.15 - 4.15 max
6	153.96	Phosphorous (P)	0.015 max
8	273.70	Sulphur (S)	0.015 max
		Silicon (Si)	0.50 max
		Titanium (Ti)	0.4 max

  

Mechanical Properties	
Property	Value
Ultimate Tensile Strength	760-830 N/mm <sup>2</sup>
0.2% Proof Stress	345-415 N/mm <sup>2</sup>
Elongation	25-30%
Hardness HRC (max)	35

  

Physical Properties	
Property	Value
Density (Kg/m-1)	84.4
Magnetic Permeability (20°C)	<1.001
Young's Modulus (N/mm <sup>2</sup> )	205 x 10
Specific Heat, 20°C	410
Specific Electrical Resistance, 20°C	1.29
Thermal conductivity, 20°C	9.9
Mean coefficient of thermal expansion, 20-100 °C	12.8 x 10

## Disclaimer

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