

Nickel Alloys - Alloy K500

Round Bar

Properties

Stock		Chemical Properties	
Diameter (in)	Weight kg/m	Element	Chemical Composition %
1/2	1.07	Aluminium (Al)	2.30 - 3.15 max
5/8	1.67	Carbon (C)	0.18 max
3/4	2.41	Copper (Cu)	27.0 - 33.0 max
7/8	3.27	Iron (Fe)	2.0 max
1	4.28	Manganese (Mn)	1.5 max
1 1/4	6.68	Nickel (Ni)	63.0 min
1 1/2	9.62	Sulphur (S)	0.010 max
1 3/4	13.10	Silicon (Si)	0.50 max
2	17.11	Titanium (Ti)	0.85 max
2 1/4	21.65		
2 1/2	26.73		
2 3/4	32.34		
3	38.49		
3 1/4	45.17		
3 1/2	52.39		
3 3/4	60.14		
4	68.43		
4 1/2	86.60		
5	106.92		
5 1/4	117.87		
5 1/2	129.37		
6	153.96		
6 1/2	180.69		
7	209.55		
8	273.70		
10	427.66		

Mechanical Properties	
Property	Value
Ultimate Tensile Strength	830-970 N/mm ²
0.2% Proof Stress	550-689 N/mm ²
Elongation	15% min
Hardness HRC (max)	35

Physical Properties	
Property	Value
Density (Kg/m-1)	84.3
Magnetic Permeability (20°C)	<1.005
Young's Modulus (N/mm ²)	179 x 10 ³
Specific Heat, 20°C	418
Specific Electrical Resistance, 20°C	0.62
Thermal conductivity, 20°C	17.5
Mean coefficient of thermal expansion, 20-100 °C	13.4 x 10 ⁻⁶

Disclaimer

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