

ALLOY 500

Grade: Alloy 500 (K500, BS 3076 NA18, N05500, ASTM B865, QQ-N-286)

Type: Precipitation hardened nickel copper alloy

Nominal Composition	
Element	Weight %
Carbon	0.18 max
Silicon	0.5 max
Manganese	1.5 max
Phosphorus	0.02 max
Sulphur	0.01 max
Nickel (plus Cobalt)	63 min
Aluminium	2.30-3.15 max
Titanium	0.35-0.85 max
Copper	27-33
Iron	2.0 max

Mechanical Properties Condition: Hot finished and precipitation (age) hardened. Typical properties below:

Property	Typical Values
Ultimate Tensile Strength	135 min Ksi
0.2 % Yield Strength	95 min Ksi
Elongation	20 % min
Hardness	35 HRC max (NACE MR0175)

Alternatively can be cold worked. Or supplied annealed and age hardened.

Notes:

Excellent marine corrosion resistance, strength and hardness up to 650C. Also suitable for cryogenic applications.

Typical use: Marine engineering pump and propeller shafts, impellers, oil field tools, springs and fasteners, electronic component applications and pump and valves components used in chemical processing industries