

MONEL ALLOY K-500

NICKEL ALLOY

BOLTING MATERIAL FOR LOW TEMPERATURE SERVICE

MONEL ALLOY 500 is A precipitation-hardenable nickel-copper alloy that combines the corrosion resistance of MONEL alloy 400 with greater strength and hardness. It also has low permeability and is nonmagnetic to temperatures as low as -150°F (-101°C). Used for pump shafts, oil-well tools and instruments, doctor blades and scrapers, springs, valve trim, fasteners, and marine propeller shafts

Chemical Properties

| C | Mn | S | Si | Cr | Ti | Al | Fe | Ni |
|----------|----------|-----------|----------|-----------|-----------|-----------|----------|---------|
| 0.25 Max | 1.50 Max | 0.010 Max | 0.50 Max | 63.0-70.0 | 0.35-0.85 | 2.30-3.15 | 2.00 Max | BALANCE |

Mechanical Properties

| Yield strength | Tensile strength | Elongation | Hardness |
|----------------|------------------|------------|----------|
| Min 0.2% Mpa | Min Mpa | Min % | HRB |
| 620 | 900 | 20 | 24-37 |

Physical Properties

| Density | Elastic Modulus | Mean Coefficient of Thermal | | | Thermal Conductivity | | Specific Heat | Melting Point |
|----------------------|-----------------|-----------------------------|------|------|----------------------|------|---------------|---------------|
| (Kg/m ³) | (Gpa) | Expansion(µm/m/°C) | | | (W/m.K) | | 0-100°C | F° |
| 8.44 | 179 | 11.2 | 14.9 | 17.3 | 12.4 | 40.7 | 297.3 | 2400-2460 |

Heat Treatment

Solution annealed and precipitation hardened

Equivalent Designation

UNS N05500
W.Nr. 2.4375
En Name NiCu30 Al
AFNOR NU30AT

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