UNS C63000

Smiths Advanced Metals

Nickel Aluminium Bronze Bar

For naval, aerospace and offshore applications

UNS C63000 is a nickel aluminium bronze. The addition of nickel in the alloying process increases the product's strength without impacting overall ductility, corrosion resistance or toughness which remains excellent.

UNS C63000 provides superior resistance to saltwater corrosion, high strength, good fatigue resistance and excellent resistance to shock, wear and abrasion. The alloy offers slightly lower mechanical properties when compared to BS B23 but improved ductility and high corrosion resistance in marine environments. Commercial uses for UNS C63000 include naval, aerospace and sub-sea and above-sea applications.

Our bars of grade UNS C63000 are stocked and made available in various sizes and we offer in-house processing options to cut your bar products to specific lengths.

Grades / Specifications

- AMS4640
- ASTM B124
- ASTM B150
- EN12163
- QQC-C465
- CuAl10Ni5Fe4 (CW307G)
- UNS C63000

Key Applications

- Landing gear bushes
- Pump parts
- Marine fasteners
- Heat exchangers

Chemical Composition (weight %)

	Cu	Al	Ni	Fe	Mn	Si	Sn	Zn
min.	Bal	9.00	4.00	2.00				
max.	Bal	11.00	5.50	4.00	1.50	0.25	0.20	0.30

As per AMS 4640

Mechanical Properties

Diameter	25.4mm or less	25.4 - 50.8mm	50.8 - 79.2mm	79.2 - 127.0mm	Hardness	
UTS	758 MPa	758 MPa	724 MPa	689 MPa	Up to 50.8mm	201-248 HB
0.2% Proof Strength	469 MPa	414 MPa	379 MPa	345 MPa		
Elongation	10%	10%	10%	10%	50.8mm to 127mm	187-241 HB

Properties as per AMS 4640

Technical Sales Assistance

To find out more about the UNS C63000 nickel aluminium bronze bars and for other technical advice, contact Smiths Advanced Metals today. Our team of qualified metallurgists and engineers will be pleased to assist further on any technical topic.

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