BronzeC63000

Technical Datasheet

Bronze Alloy

Service. Quality. Value.

Typical Applications

- Aerospace landing gear
- Gears
- Worm Wheels
- Marine fasteners
- Thrust washers
- Springs
- Wear plates
- Safety tools (non sparking)

Product Description

C63000 is the most commonly used grade of nickel aluminium bronze in America. It was designed as an equivalent to the European nickel aluminium bronzes and has been developed to become an aerospace material under the AMS4640 specification. It combines high strength with toughness and has an excellent resistance to wear, shock and abrasion. Another major benefit of this alloy is its ability to offer a high retention of its mechanical properties at elevated temperatures.

Weldability

Good.

Related material specifications

- AMS4640
- CW307G
- CA104

Key features

- Retention of properties at cryogenic temperatures
- Excellent wear & abrasion resistance
- Good strength & toughness
- High corrosion resistance
- Excellent resistance to shock
- Spark resistance

Availability

Round bar, hexagon.

Cut to size capability

There are thirty power saws within the Smiths group including a fully automated magazine feed CNC rod blanking line. We can economically cut from one off blanks to the largest production run for immediate or just in time deliveries.

Corrosion Resistance

Excellent

Machinability

Good / fair.

Chemical Composition (weight %)

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

Mechanical Properties

Diameter	**25mm and under**	**25-50mm incl.**	**50-80mm**
UTS	760 N/mm^2	760 N/mm^2	725 N/mm^2
0.2% Proof Strength	470 N/mm^2	415 N/mm^2	380 N/mm^2
Elongation	10%	10%	10%
	Up to 50.8mm	**50.8mm to 127mm**	
Hardness	201-248 HB	187-241 HB	

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.