

NES 833 (DEF STAN 02-833)

BRONZE ALLOY

PRODUCT DESCRIPTION

NES 833 is an alloy which is similar to CA104 – it is a nickel aluminium bronze but has been manufactured specifically in accordance with the MOD's Naval requirements. The specification dictates that the nickel content of the alloy must exceed the iron content which enhances the alloys overall corrosion resistance. The material is ultrasonically tested to DEF STAN 02-279 Part 5 Issue 3 and to NDE02-05 whilst impact values are also taken on all size above 15mm in diameter.



KEY FEATURES

- Excellent corrosion & erosion resistance in marine environments
- Excellent galling resistance
- Good overall strength and toughness
- High wear, high abrasion resistance

APPLICATIONS

- Marine valves, pumps and hardware
- Wear plates, thrust washers and worm gears
- Heavy duty bearings and bushes

AVAILABILITY

Round bar, hexagon

MATERIAL SPECIFICATIONS

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MACHINABILITY

Good / fair

CHEMICAL COMPOSITION (weight %)

	Cu	Al	Ni	Fe	Mn	Total Impurities
Min	Rem	8.50	4.50	4.00		
Max	Rem	10.00	5.50	5.00	0.50	0.50

MECHANICAL PROPERTIES

	6 - 15mm	15 - 25mm	25 - 100mm	>100mm
Diameter				
UTS	680 N/mm ²	680 N/mm ²	635 N/mm ²	620 N/mm ²
Proof Strength	325 N/mm ²	325 N/mm ²	295 N/mm ²	245 N/mm ²
Elongation	17%	17%	17%	17%
Impact Strength	--	24J	27J	23J