



BRODER METALS GROUP NES833

NES833 / DEF STAN 02-833 is a corrosion resistant material favoured for use in marine and offshore industries for valve components, fasteners and heat exchangers.

NES833 Aluminium Bronze Specifications

Broder Metals Group supply NES833 Aluminium Bronze with the intent of meeting the following relevant classes and specifications on the final product: DEF STAN 02-833 PART 2 ISSUE 2 GRADE 1 ALUMINIUM BRONZE. For more information on NES833 contact us or download our technical information sheet.

Applications

Because of its excellent corrosion resistance in seawater NES833 is used widely in marine environments. Abrasion resistance, non-sparking, strength and toughness in NES833 enables its use in safety tools, valves, fasteners, springs, gears and bearings under heavy loads.

NES833 Technical Table

Grade	NES833 PART 2 ISSUE 2 GRADE 1		
Specification	DEF STAN 02-833 PART 2 ISSUE 2 GRADE 1 ALUMINIUM BRONZE		
Use	Extensively within marine environments for pumps, weapons handling systems, couplings, fasteners and gears.		
Strengths	Good ductility & impact strength. Superior sea water corrosion resistance.		
Chemistry		Min	Max
	Al	8.5	10
	Fe	4	5
	Ni	4.5	5.5
	Mn	-	0.5
	Zn*	-	0.4
	Pb*	-	0.05
	Sn*	-	0.1
	Si*	-	0.1
	Mg*	-	0.05
	Total Impurities*	-	0.05
	Cu	Balance	
Notes	Al needs to be commercially pure 99.7% with max Mg content 0.05%		
	Ni content must be greater than Fe content		

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NES833 Technical Table (continued)

Grade	NES833 PART 2 ISSUE 2 GRADE 1			
Heat Treatment	Extruded rods etc < 40 mm dia	Rolled & Forged rods etc < 30 mm dia	Rods etc above sizes to left	
	720-760 deg° Air Cool	720-760 deg° Air Cool	To be supplied as one of: a. Hot worked b. Stress relieved (after cold working) c. Heat Treated (details reported)	
	Heat to be maintained for 20 minutes per 25 mm section (with min 1 hour)			
Mechanicals	Tensile N/mm2 (min)	0.2% Proof stress N/mm2 (min)	Elongation on 5.65 gauge length %	Izod Value J (min)
< 15 mm dia	680	325	17	-
15 mm – 25 mm	680	325	17	24
25 mm -100 mm	635	295	17	27
100 mm + dia	620	245	15	23
Notes	Within the DEF STAN standard, Forgings are divided into 4 Classes while rods, profiles and rectangular bars are divided into 2 grades. The classification delineates the importance of the application that the end product will be used for and different classes and grades require different levels of control, reporting and testing (for example 100% ultrasonic) – all of which we can handle – please ask us if you require advice.			

NES933 is just one of a range of corrosion resistant materials stocked by Broder Metals Group Ltd – please see our website for the full range stocked: www.broder-metals-group.com

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