SPECIFICATIONS

Commercial	NES838 DEF STAN 838

A Phosphor Bronze Alloy with high strength and very high corrosion resistance especially in sewater and marine enviroments. Mainly used in Naval Engineering, Nuclear, Aerospace and Defence Applications.

CHEMICAL COMPOSITION

DEFSTAN 02-838(PT1)/1(2012)
Phosphor Bronze

Element	% Present
Tin (Sn)	4 - 5.5
Phosphorous (P)	0.02 - 0.4
Nickel (Ni)	0.3 max
Silicon (Si)	0.3 max
Zinc (Zn)	0.3 max
Iron (Fe)	0.1 max
Lead (Pb)	0.02 max
Copper (Cu)	Balance

ALLOY DESIGNATIONS

DEF STAN 02-838
NES838
NES 838
DEF STAN 838

TEMPER TYPES

ANNEALED

SUPPLIED FORMS

Annealed Bar - Grade 1
- Bar
- Rod

MECHANICAL PROPERTIES

DEFSTAN 02-838(PT1)/1(2012)
Bar
6mm to 18mm

Property	Value
Proof Stress	410 Min MPa
Tensile Strength	500 Min MPa
Elongation A	12 Min %

Mechanical Prperties shown are for annealed bar.

DEFSTAN 02-838(PT1)/1(2012)
Bar
18mm to 40mm

Property	Value
Proof Stress	380 Min MPa
Tensile Strength	460 Min MPa
Elongation A	12 Min %

Mechanical Prperties shown are for annealed bar.

DEFSTAN 02-838(PT1)/1(2012)
Bar
40mm to 60mm

Property	Value
Proof Stress	320 Min MPa
Tensile Strength	380 Min MPa
Elongation A	16 Min %

Mechanical Prperties shown are for annealed bar.

DEFSTAN 02-838(PT1)/1(2012)
Bar
Over 60mm

Property	Value
Proof Stress	250 Min MPa
Tensile Strength	350 Min MPa
Elongation A	18 Min %

Mechanical Prperties shown are for annealed bar.

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CONTACT

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REVISION HISTORY

Datasheet Updated 13 November 2018

DISCLAIMER

This Data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

Please note that the 'Datasheet Update' date shown above is no guarantee of accuracy or whether the datasheet is up to date.

The information provided in this datasheet has been drawn from various recognised sources, including EN Standards, recognised industry references (printed & online) and manufacturers' data. No guarantee is given that the information is from the latest issue of those sources or about the accuracy of those sources.

Material supplied by the Company may vary significantly from this data, but will conform to all relevant and applicable standards.

As the products detailed may be used for a wide variety of purposes and as the Company has no control over their use; the Company specifically excludes all conditions or warranties expressed or implied by statute or otherwise as to dimensions, properties and/or fitness for any particular purpose, whether expressed or implied.

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