

Copper Alloys

DEFSTAN 02-834 (NES834) Bar & Forgings

Datasheet Updated
05 August 2021

SPECIFICATIONS

Commercial	NES834
EN	DEFSTAN 02-834

A silicon aluminium bronze alloy with high strength and very high corrosion resistance especially in seawater and marine environments.

CHEMICAL COMPOSITION

DEFSTAN 02-834 Rod, Section, Forging & Forging Stock

Element	% Present
Nickel (Ni)	0.00 - 0.10
Iron (Fe)	0.50 - 0.70
Manganese (Mn)	0.00 - 0.50
Silicon (Si)	2.00 - 2.40
Aluminium (Al)	6.00 - 6.40
Lead (Pb)	0.00 - 0.01
Tin (Sn)	0.00 - 0.10
Zinc (Zn)	0.00 - 0.40
Copper (Cu)	Balance

ALLOY DESIGNATIONS

- DEF STAN 02-834
- NES834
- NES 834
- DEF STAN 834
- DGS1044

SUPPLIED FORMS

Annealed bar-Grades 1 and 2. Forgings Class 1, 2, and 3.

- Bar
- Forgings
- Rod

APPLICATIONS

- High strength and non-magnetic fasteners and components
- Fasteners
- Safety tooling
- Valve components
- Non-magnetic parts
- Marine hardware
- Gears
- Bearings and bushes
- Instrumentation components

CHARACTERISTICS

- High strength and toughness
- Excellent corrosion resistance
- High impact strength
- Excellent wear resistance
- Very low magnetic permeability
- Good machinability
- Excellent cryogenic properties

MECHANICAL PROPERTIES**DEFSTAN 02-834****Forging & Forging Stock All**

Property	Value
Proof Stress	220 Min MPa
Tensile Strength	525 Min MPa
Elongation A50 mm	20 Min %

DEFSTAN 02-834**Rod & Section Over 100mm**

Property	Value
Proof Stress	220 Min MPa
Tensile Strength	525 Min MPa
Elongation A50 mm	20 Min %

DEFSTAN 02-834**Rod & Section 50mm to 100mm**

Property	Value
Proof Stress	235 Min MPa
Tensile Strength	525 Min MPa
Elongation A50 mm	20 Min %

DEFSTAN 02-834**Rod & Section Up to 50mm**

Property	Value
Proof Stress	275 Min MPa
Tensile Strength	525 Min MPa
Elongation A50 mm	20 Min %

DISCLAIMER

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