

Copper Alloys

DEFSTAN 02-780 (NES780) Bar & Tube

Datasheet Updated
05 August 2021

RANGE

Product Form	Size Range	Wall Thicknesses
Round Bar DEFSTAN 02-780	25mm - 230mm	-
Tube DEFSTAN 02-780	6mm - 159mm	Various

SPECIFICATIONS

Commercial	NES780
EN	DEF STAN 02-780

A 70/30 copper-nickel alloy with small additions of iron and manganese to improve resistance to high velocity seawater.

CHEMICAL COMPOSITION

Element	% Present
Iron (Fe)	0.60 - 1.00
Manganese (Mn)	0.50 - 1.50
Nickel (Ni)	29.00 - 32.00
Copper (Cu)	Balance

ALLOY DESIGNATIONS

NES 780 copper nickel corresponds to the following designations **but may not be a direct equivalent**:

- CN107
- C71500
- NES 780
- CW354H

SUPPLIED FORMS

- Bar
- Fittings & Flanges
- Pipe
- Tube

APPLICATIONS

- Salt water flanges, salt water piping and pipe fittings, valve bodies, sea water intakes, pipe fittings, water boxes, propeller sleeves, pump bodies and parts
- Marine hardware
- Heat exchangers
- Condensers
- Desalination units
- Evaporator tubes, distiller tubes, refrigerator and condenser components
- Flexible metal hose
- Boiler parts
- Pipework
- Submarine components

CHARACTERISTICS

- Excellent corrosion and pitting resistance in marine environments
- Good strength and toughness
- Resistance to biofouling
- Readily weldable and fabricated

**MECHANICAL PROPERTIES**

Property	Value
Elongation A50 mm	34 %
Proof Stress	125 N/mm ²
Tensile Strength	330 N/mm ²

DISCLAIMER

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