

Copper Alloys

DEFSTAN 02-779 (NES779)

Datasheet Updated
05 August 2021

RANGE

Product Form	OD Range	Wall Thicknesses
Tube DEFSTAN 02-779	6mm - 159mm	Various
Tube Commercial 90/10	16mm - 219mm	Various

A range of 90/10 fittings are also available:

- Concentric Reducers
- Type S Inner Flanges
- Outer Flanges
- 90° Long Radius Elbows
- 45° Long Radius Elbows
- Tee Pieces

SPECIFICATIONS

Commercial	NES779 90/10
EN	DEFSTAN 02-779

A copper-nickel alloy which contains 90% copper and 10% nickel and offers outstanding corrosion resistance.

CHEMICAL COMPOSITION

NES 779 DEFSTAN

Element	% Present
Manganese (Mn)	0.50 - 1.00
Nickel (Ni)	10.00 - 11.00
Copper (Cu)	86.00 - 88.50
Others (Total)	0.00 - 0.22
Iron (Fe)	Balance

ALLOY DESIGNATIONS

- UNS N05500
- BS 3076 NA18
- ASTM B865

SUPPLIED FORMS

- Bar
- Fittings & Flanges
- Castings
- Forgings
- Pipe
- Tube
- Sheet
- Rod
- Plate

APPLICATIONS

- Offshore & marine: Salt water pipes and fittings, hot water tanks, salt water baffles, propeller sleeves, valve and pump components, flanges, boat hulls, marine fittings and marine hardware
- Chemical processing: Heat exchanger and cooling plant, evaporator tubes, pump and valve trim
- Power steering tube
- Brake lines
- Condenser plates
- Pressure vessels
- Distiller tubes



CHARACTERISTICS

- High ductility and toughness
- Excellent resistance to erosion and corrosion in seawater
- Inherent resistance to biofouling
- Excellent fabrication and welding properties
- Retention of mechanical properties down to cryogenic temperatures

MECHANICAL PROPERTIES

Property	Value
Elongation A50 mm	30 %
Proof Stress	120 MPa
Tensile Strength	280 MPa

DISCLAIMER

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