

CN102 Copper Nickel Bar (BS 2874)

Smiths Advanced Metals

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Saltwater Corrosion Resistance

CN102 is a copper-nickel alloy bar product produced to British standards and released to BS 2874.

We stock solid round bars in various diameters to suit your engineering requirements. As our stockholding offers closer incremental sizes, it results in engineering materials that are very near (or in some cases) perfect for your needs. Stocking products in this way saves you money and often negates any need to machine materials down.

About CN102

Our CN 102 copper-nickel bars are the British Standard equivalent specification to 90/10 copper-nickel, containing 90% copper and 10% nickel with traces of manganese and iron for improved corrosion resistance and strength.

The alloy is highly suitable for use in marine applications, including the offshore and shipbuilding industry. While CN107 provides improved strength and performance in fast-flowing seawater, CN102 is more cost-effective and still highly suitable for many applications. mechanical properties at low temperatures.

Benefits

- Highly suitable for saltwater environments
- High toughness and ductility
- Excellent corrosion resistance



Key Applications

- Pressure vessels
- Heat exchangers
- Pump & valve components

*Chemical Composition (weight %)

	Cu	Ni	Mn	Fe	C	S	Pb	Others
min.	Bal	10.00	0.50	1.00				
max.	Bal	11.00	1.00	2.00	0.05	0.05	0.01	0.30

* Properties as per BS 2874

*Physical & Mechanical Properties

Density	8.90 gm/cm ³ @ 20°C
Melting point	1100 - 1145°C
Specific Heat Capacity	0.09 cal/g°C @ 20°C
Electrical Conductivity	5.8 microhm mm ² or 10% IACS
Ultimate Tensile Strength	280 MPa min
Elongation	27%

* Properties as per BS 2874

Performance Characteristics

The material combines good resistance to hydrogen embrittlement with excellent corrosion resistance. Other characteristics include high levels of ductility and toughness while maintaining moderate strength.

CN102 is also an effective material in hygienic environments. Hospital intensive care units utilise the alloy due to the product's excellent anti-microbial properties.

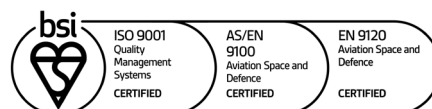
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