

Copper Nickel 70/30

Smiths Advanced Metals

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Cupronickel Alloy

For demanding applications

Copper Nickel 70/30 is a cupronickel alloy that offers slightly better strength than 90/10. The added strength is due to further additions of iron and manganese during the alloying process, resulting in a more suitable product for demanding applications.

The alloying process also increases the erosion and corrosion resistance of the material. The overall corrosion resistance of 70/30 shows a marked improvement, particularly in high velocity or polluted waters. Offering a combination of excellent corrosion and pitting resistance in marine environments, the alloy is commonly used in the petrochemical, oil and gas industry, and marine applications.

Smiths Advanced Metals stocks [Copper Nickel 70/30 bars](#) in the annealed condition with bars available in a variety of sizes.



Grades / Specifications

- ASTM B151
- BS 2874
- DEF STAN 02-780
- DEF STAN 02-879
- CN107
- CuNi30Mn1Fe
- CW354H
- NES780
- UNS C71500

Key Applications

- Heat exchangers
- Saltwater flanges
- Pump components
- Evaporator tubes
- Boiler parts

Chemical Composition (weight %)

	Cu	Ni	Mn	Fe	C	Al	S	B	P	Pb	Si	Bi	Others
min.	Bal	29.00	0.50	0.60									
max.	Bal	32.00	1.50	1.00	0.06	0.03	0.02	0.02	0.01	0.01	0.05	0.002	0.30

As per DEF STAN 02-879

Physical Properties

Density	8.94 g/cm ³
Melting point	1170-1240°C
Elastic modulus	150 GPa

Mechanical Properties (Cross Sectional Area: over 1230 mm²)

Ultimate Tensile Strength	310 MPa
0.2% Proof Strength	110 MPa
Elongation	30%
Izod	54J

As per DEF STAN 02-879

Benefits

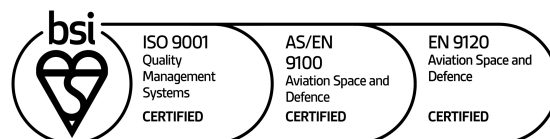
- Excellent corrosion and pitting resistance in marine atmospheres
- Higher-strength and better corrosion resistance compared with 90/10
- Readily weldable

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