

Lastek 501

Welding CuNi 90/10

CLASSIFICATION

EN ISO 24373 : CuNi10 - Cu 7061

GENERAL DESCRIPTION

Alloy for TIG welding of copper-nickel alloys with 10 % nickel.
High corrosion and erosion resistance in seawater.
Porous free welds, with high toughness.

APPLICATIONS

Heat exchangers for marine, power, chemical, petrochemical service, condensers, evaporators, coolers, radiators.
Assembling piping sections for salt water circulation aboard ships.
Welding alloy C70600, Cunifer 10.

CHEMICAL COMPOSITION (%) (Typical values, all weld metal)

C : < 0.05	Mn : 0.50 - 1.50	Si : < 0.20	Fe : 0.50 - 2.00	Pb : < 0.02
Ti : 0.10 - 0.50	Ni : 9.00 - 11.00	P : < 0.02	S : < 0.02	

MECHANICAL PROPERTIES (Typical values, all weld metal)

Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation 5d (%)	Impact Strength Charpy V notch (ISO-V)
≥ 180 MPa	≥ 300 MPa	≥ 20%	≥ 60 J (-21°C)

GENERAL INFORMATION

Welding positions	NA		
Shielding gas	Argon (or Helium or Argon/Helium mixed gas)		
Packing	5 kg in a cardboard box		
Polarity	DC+		
Diameter (mm)	1.6	2.4	3.2
Length (mm)	1000	1000	1000

Tips & tricks

Always thoroughly remove oil and grease, marking crayons and cutting lubricants as those elements could create hot intergranular cracking under high restraint. Also remove mill scale or oxides on the surface by brushing with a stainless brush.
If thickness is less than 3 mm prepare the edges square; when higher than 3 mm use a single V with 80° included angle.
We recommend Lastek 503 (higher strength) for sections thicker than 3 mm in copper nickel 90/10, although Lastek 503 is more prone to hot cracking in presence of contaminants and has a higher melting temperature.
Grooved copper bars on the underside can help to control penetration.
No preheat or post heat treatment is required.

The information in this document is based on intensive tests and is accurate to the best of our knowledge. Do note that these values are only typical values for tests in accordance to prescribed standards. The suitability of the product should always be confirmed by qualification tests before use in any application. The information can be changed without previous notice.