

NICKEL COPPER ALLOY WELDING WIRE

AWS ERNiCu-8.....2

AWS ERNiCu-7.....3

Characteristics:

- 1.ERNiCu-8 alloy has excellent corrosion resistance, especially in marine environment and chemical industry.
- 2.The alloy can still maintain good mechanical properties in high temperature environment and is suitable for welding of high temperature equipment.
- 3.ERNiCu-8 alloy has good weldability and is suitable for a variety of welding methods, including TIG, MIG and manual arc welding.

Application:

ERNiCu-8 is mainly used for welding nickel-copper alloys, such as MONEL 400 alloy, and is also suitable for welding equipment such as marine engineering, salt industry, evaporators, condensers, etc. In addition, it can also be used for welding specific bronze materials and nickel-copper alloys.

Power polarity:DC+

Chemical composition.

Item	C	Mn	P	S	Si	Ni	Mo
AWS Standard	0.05max	1.00max	0.03max	0.03max	0.50max	38.0-46.0	2.5-3.5
Item	Ti	Al	Fe	Cu	Cr		
AWS Standard	0.6-1.2	0.2max	22.00min	1.50-3.00	19.50-23.50		

**Mechanical properties.**

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	≥918 MPa	≥823 MPa	≥22%

Welding Requirements.

1. When using welding processes with high heat input (such as MIG welding), micro cracks may occur and should be avoided as much as possible.
2. Ensure that the welding area is clean and free of oil, moisture and rust to avoid welding defects.
3. Depending on the specific application, post-weld heat treatment (PWHT) may be required to restore the mechanical properties and corrosion resistance of the material.

Characteristics:

1. The main component is 65Ni-30Cu-3Mn-2Ti nickel-chromium-molybdenum alloy hydrogen arc welding wire.
2. Stable arc, beautiful shaping, no spatter.
3. The molten metal has good mechanical properties.

Application:

1. Suitable for nickel-copper alloy welding itself, such as ASTM standard B127, B163, and Monel400, etc..
2. Can be used for nickel-copper alloy and steel welding and steel surface surfacing.

Power polarity:DC-**Chemical composition.**

Item	C	Mn	Si	Cu	Ni	Ti	Fe	P	S
GB/T Standard	0.15	2-4	1.2	28.0-32.0	62	1.5-3.0	2.5	-	-
AWS Standard	0.15	4.0	1.25	Rem	62-69	1.5-3.0	2.5	0.02	0.015
Example value	0.041	3.34	0.20	29.04	64.43	2.48	0.13	0.001	0.001

**Mechanical properties.**

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %	Impact value J/°C
GB/T standard	-	-	-	-
AWS Standard	-	480	-	-
Example value	353	563	41.5	271/22

Welding Requirements.

1. Before welding must be welded to remove rust, oil, water and other impurities.
2. Control the current, speed and arc length during welding, pay attention to the wire feeding angle, and ensure argon gas protection.
3. The tungsten electrode extends the length relative to the nozzle to 5mm is appropriate, the arc length of 1-3mm is appropriate.