

OK Autrod 19.49

A continuous solid Cu-Ni wire for welding of similar alloys like 90Cu10Ni-, 80Cu20Ni- and 70Cu30Ni-alloys. The nickel addition strengthens the weld metal and improves the corrosion resistance, particularly against salt water. The alloy is used for overlay welding of steels and widely used for welding of Cu-Ni components to desalination plants.

Specifications

Classifications

EN ISO 24373
SFA/AWS A5.7 : ERCuNi
EN 14640 : S Cu 7158 (CuNi30)

Alloy Type

Alloyed copper (Cu + 30 % Ni)

Shielding Gas

I1, I2, I3 (EN 439)

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
As Welded	180 MPa (26 ksi)	350 MPa (51 ksi)	40 %

Typical Wire Composition %

C	Mn	Si	Ni	Cu	Fe
0.02	0.7	0.05	31	Bal	0.5

Typical Weld Metal Analysis %

Mn	Si	P	Ni	Al	Pb	Fe
0.8	0.05	0.04	31	0.001	0.005	0.6

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed
0.8 mm (.030 in.)	60-165 A	13-17.5 V	4-13 m/min (157.5-512 in./min)
1.0 mm (.040 in.)	80-210 A	12.5-18 V	4-12 m/min (157.5-472 in./min)
1.2 mm (.045 in.)	150-320 A	16-29 V	5-11.5 m/min (197-453 in./min)

Recommended Welding Parameters

Current	Wire Diameter	Voltage	Wire Feed Speed
60-165 A	0.8 mm (0.030 in.)	13-17.5 V	4.0-13.0 mm/min (157-512 in./min)
80-210 A	1.0 mm (0.040 in.)	12.5-18 V	4.0-12.0 mm/min (157-472 in./min)
150-320 A	1.2 mm (0.047 in.)	16-29 V	5.0-11.5 mm/min (197-453 in./min)