

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 Weld Metal Analysis %						
Mn	Si	P	Ni	Al	Pb	Fe
0.8	0.05	0.04	31	0.001	0.005	0.6

Typical Wire Composition %					
C	Mn	Si	Ni	Cu	Fe
0.02	0.7	0.05	31	Bal	0.5

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