

Nickel Alloy Wire

Alloy: WWNA99

Conforms to Certification: AWS A5.15

Class: ERNi-CI

ASME SFA A5.15

Alloy: ERNi-CI (Alloy NA99)

Weld Process: GMAW, GTAW Welding Processes

AWS Chemical Composition Requirements

C = 0.1 max	Si = 0.10 max
Mn = 0.30 max	Cu = 0.20 max
Fe = 0.20 max	Ni = 99.2 min
S = 0.01 max	P = 0.01 max

Deposited All Weld Metal Properties % (AW)

Tensile Strength	70,000psi
Yield Strength	36,000psi
Elongation	40%

Deposited Chemical Composition % (Typical)

C = 0.01	S = 0.002	Ni = 99.62
Mn = 0.17	Cu = 0.13	Fe = 0.01
Si = 0.05	P = 0.001	

Deposited Charpy-V-Notch Impact Properties %

Not applicable

Application

ERNi-CI Nickel Alloy 99 classification is used for tig and mig welding of cast irons. Major use is the repair of gray iron castings. The welds are easy to machine.

Recommended Welding Parameters for TIG and MIG Welding of Nickel Alloys

<u>Process</u>	<u>Diameter of Wire</u>	<u>Voltage (V)</u>	<u>Amperage (A)</u>	<u>Gas</u>
Tig	.035 inches x 36	12 -15	60 -90	100% Argon
	.045 inches x 36	13 -16	80 - 110	100% Argon
	1/16 inches x 36	14 - 18	90 - 130	100% Argon
	3/32 inches x 36	15 - 20	120 -175	100% Argon
	1/8 inches x 36	15 - 20	150 - 220	100% Argon
MIG	.035 inches	26 - 29	150 - 190	75% Argon + 25% Helium
	.045 inches	28 - 32	180 - 220	75% Argon + 25% Helium
	1/16 inches	29 - 33	200 - 250	75% Argon + 25% Helium

Note: Other shielding Gases may be used for Mig and Tig welding. Shielding gases are chosen taking Quality, cost, and Operability into consideration.

