WELDWIRE COMPANY, INC. **Technical Information**

Nickel Alloy Wire

Alloy: WWG-3 Conforms to Certification: AWS A5.14
Class: ERNiCrMo-9 ASME SFA A5.14

Alloy: ERNiCrMo-9 (Alloy G-3)
Weld Process: GMAW, GTAW Welding Processes

AWS Chemical Composition Requirements

C = 0.015 max	Cu = 1.5 – 2.5
Mn = 1.0 max	Ni = Remainder
Fe = 18.0 – 21.0	Co = 5.0 max
P = 0.04 max	Cr = 21.0 – 23.5
S = 0.03 max	Nb+Ta = 0.50 max
Si = 1.0 max	Mo = 6.0 – 8.0
W = 1.5 max	Other = 0.50 max

Deposited All Weld Metal Properties % (AW)

Tensile Strength	96,000psi
Elongation	29%

Deposited Chemical Composition % (Typical)

C = 0.01	Cr = 22.0	Ni = Balance
Cu = 2.0	Mo = 7.1	Fe = 20.5
Co = 2.75		

Deposited Charpy-V-Notch Impact Properties %

Not applicable

Application

ERNiCrMo-9 is used for welding nickel-chromium-molybdenum base materials to themselves, steel and other nickel base alloys, and for cladding steels.

Recommended Welding Parameters for TIG and MIG Welding of Nickel Alloys

Process	Diameter of Wire	Voltage (V)	Amperage (A)	Gas
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.

If additional information is needed Contact Weldwire Company, Inc. 800-523-1266