



# PRODUCT

## DATA SHEET

Nickel Alloy Wire

Weld Process: GMAW, GTAW & SAW

Alloy: ERNiCrCoMo-1 (Alloy 617) Class: ERNiCrCoMo-1

Conforms to Certification: AWS A5.14 / ASME SFA 5.14

### Alloy: DMNA617

AWS Chemical Composition Requirements

C = 0.05 – 0.15      Cu = 0.50 max  
 Mn = 1.0 max      Ni = Remainder  
 Fe = 3.0 max      Co = 10.0 – 15.0  
 P = 0.03 max      Al = 0.8 – 1.5  
 S = 0.015 max      Ti = 0.60 max  
 Si = 1.0 max      Cr = 20.0 – 24.0  
 Other = 0.50 max      Mo = 8.0 – 10.0

C = 0.06      P = 0.005      Ni = Balance  
 Mn = 0.20      S = 0.001      Cr = 21.8  
 Fe = 0.75      Al = 1.25      Mo = 9.05  
 Co = 12.45

Deposited All Weld Metal Properties % (AW)

Tensile Strength      112,000psi  
 Yield Strength      88,500psi  
 Elongation      28%

Deposited Chemical Composition % (Typical)

Deposited Charpy-V-Notch Impact Properties %

Not applicable

Application

ERNiCrCoMo-1 is used for welding nickel-chromium-cobalt-molybdenum base material using both the gas tungsten arc and gas metal arc process. Also other cast heat-resisting alloy and dissimilar metals for high temperature service up to 2100° F.

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.



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