Alloy: COREWELD 617 | Class: ERNiCrCoMo-1

ERNiCrCoMo-1 (Alloy 617) • Weld Processes: GMAW & GTAW

CERTIFIED TO
AWS A5.14
ASME SFA A5.14

AWS CHEMICAL COMPOSITION REQUIREMENTS | DEPOSITED CHEMICAL COMPOSITION % (TYPICAL)

AWS REQUIREMENT (%)		TYPICAL DEPOSIT (%)	
C	0.05 – 0.15	**C**	0.06
Cu	0.50 max	**P**	0.005
Mn	1.0 max	**Ni**	Balance
Ni	Remainder	**Mn**	0.20
Fe	3.0 max	**S**	0.001
Co	10.0 – 15.0	**Cr**	21.8
P	0.03 max	**Fe**	0.75
Al	0.8 – 1.5	**Al**	1.25
S	0.015 max	**Mo**	9.05
Ti	0.60 max	**Co**	12.45
Si	1.0 max		
Cr	20.0 – 24.0		
Other	0.50 max		
Mo	8.0 – 10.0		

DEPOSITED ALL WELD METAL PROPERTIES % (AW) | CHARPY-V-NOTCH IMPACT PROPERTIES %

MECHANICAL PROPERTY		CHARPY-V-NOTCH IMPACT
Tensile Strength	112,000 psi	*Not applicable*
Yield Strength	88,500 psi	
Elongation	28%	

APPLICATION

COREWELD 617 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 & MIG WELDING OF NICKEL ALLOYS

PROCESS	DIAMETER OF WIRE	DIAMETER OF WIRE (MM)	VOLTAGE (V)	AMPERAGE (A)	GAS
TIG					
	.035 in	0.90	12–15	60–90	100% Argon
	.045 in	1.20	13–16	80–110	100% Argon
	1/16 in	1.60	14–18	90–130	100% Argon
	3/32 in	2.40	15–20	120–175	100% Argon
	1/8 in	3.20	15–20	150–220	100% Argon
MIG					
	.035 in	0.90	26–29	150–190	75% Argon + 25% Helium
	.045 in	1.20	28–32	180–220	75% Argon + 25% Helium
	1/16 in	1.60	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.

METRACORE ALLOYS PVT LTD.
191 Nawsariwala Building, Shop No 7, Ground Floor, 2nd Kumbharwada Main Road, Near Gol Deval Temple, Mumbai – 400004
Email: sales@metracorealloys.com | Contact: +91-9167564557