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ERCuNi

Shanti Metal Supply Corporation ERCuNi

AWS CLASS ERCuNi

AWS Chemical Composition Requirements	
Element	**Composition (%)**
Cu	Remainder
Ni	29.0 – 32.0
Mn	1.0 max
P	0.02
Fe	0.40 – 0.75
Pb	0.02
Si	0.25 max
Ti	0.20 – 0.50
Other	0.50 max

Deposited All Weld Metal Properties % (AW)	
Element	**Composition (%)**
Ni	31
Mn	0.75
P	0.006
Cu	Balance
Si	0.1
Ti	0.35
Fe	0.55

Deposited Chemical Composition % (Typical)	
Property	**Value**
Tensile Strength	54,000 psi
Yield Strength	21,500 psi
Elongation	32%

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Recommended Welding Parameters for TIG,MIG, and SAW Welding of Nickel Alloys				
Process	**Diameter of Wire**	**Voltage (V)**	**Amperage (A)**	**Gas/Flux**
TIG	.035 inches x 36	Dec-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
SAW	3/32 inches	28 - 30	275 - 350	Suitable Flux may be used
	1/8 inches	29 - 32	350 - 450	Suitable Flux may be used
	5/32 inches	30 - 33	400 - 550	Suitable Flux may be used

Note

- Other shielding gases may be used for MIG and TIG welding, considering quality, cost, and operability.
- Both agglomerated and fused fluxes suit SAW, influencing weld metal chemistry, corrosion resistance, and mechanical properties.