DURAMAX®
Inspiring the future generations of welders

Product Data Sheet

Copper & Copper Alloy Wire

Weld Process: GMAW, GTAW and SAW and Oxy-Fuel Welding Processes

Alloy: ERCuNi (Alloy 67) ***Class: ERCuNi***

Conforms to Certification: AWS A5.7 ASME SFA 5.7 Alloy: DMNA067

Application

ERCuNi (NA67) is used for gas metal and gas tungsten arc welding. Can also be used by oxy-fuel welding of 70/30, 80/20, and 90/10 copper nickel alloys. A barrier layer of nickel alloy 610 is recommended prior to overlaying steel with GMAW weld process.

AWS Chemical Composition Requirements

Cu	Ni	Mn	P	Fe	Pb	Si	Ti	Other
Remainder	29.0 - 32.0	1.0 max	0.02	0.40 - 0.75	0.02	0.25 max	0.20 - 0.50	0.50 max

Deposited Chemical Composition % (Typical)

Ni	Cu	Fe	Mn	Si	P	Ti
31.0	Balance	0.55	0.75	0.10	0.006	0.35

Deposited All Weld Metal Properties % (AW)

Tensile Strength	Yield Strength	Elongation	Charpy-V-Notch Impact Properties
54,000psi	21,500psi	32%	Not applicable

Recommended Welding Parameters for TIG, MIG, and SAW 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
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

Notes

Note: Other shielding Gases may be used for Mig and Tig welding. Shielding gases are chosen taking Quality, cost, and Operability into consideration.
Note: Both agglomerated and fused fluxes can be used for submerged arc welding.
Note: The chemical composition of the flux mainly affects the chemistry of the weld metal and consequently its corrosion resistance and mechanical properties.

DURAMAX Brand
103 Queens Drive, King of Prussia, PA 19406
Phone: 610-265-3555
Toll Free: 800-692-5930 Fax: 610-265-7806