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Product Data Sheet

NICKEL ALLOY WIRE WWNA55

Alloy: ERNiFe-CI (Alloy NA55) **Weld Process: GMAW, GTAW** **AWS A5.15 / ASME SFA A5.15**

Application

ERNiFe-CI, Nickel Alloy 55 is used welding gray, ductile and Ni-resist cast irons to wrought alloys. It is also noted for high sulfur, phosphorus or lubricant-contaminated castings.

AWS Chemical Composition Requirements

C	Mn	Fe	S	Cu	Si	P	Ni	Other
0.1 max	0.5 - 1.5	Remainder	0.02 max	0.20 max	0.20 max	0.02 max	55.0 min	1.0 max

Deposited Chemical Composition % (Typical)

C	Mn	Si	S	Cu	P	Ni	Fe
0.05	0.25	0.106	0.003	0.10	0.007	55.51	Balance

Deposited All Weld Metal Properties % (AW)

Tensile Strength	Yield Strength	Elongation	Charpy-V-Notch Impact
89,500psi	62,000psi	35%	Not applicable

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

Notes

Note: Other shielding Gases may be used for Mig and Tig welding. Shielding gases are chosen taking Quality, cost, and Operability into consideration.

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