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Product Data Sheet

NICKEL ALLOY WIRE DMHASC276

Alloy: ERNiCrMo-4 (Hastelloy C276) **Weld Process: GMAW & GTAW** **AWS A5.14 / ASME SFA 5.14**

Application

ERNiCrMo-4 is used for welding nickel-chromium-molybdenum base materials to itself, steel and other nickel base alloys and for cladding steel.

AWS Chemical Composition Requirements

C	Mn	Fe	P	S	Si	Cu	Ni	Co	Cr	Mo	W	Other	V
0.02 max	1.0 max	4.0 to 7.0	0.04 max	0.03 max	0.08 max	0.50 max	Remainder	2.5 max	14.5 - 16.5	15.0 - 17.0	3.0 - 4.5	0.50 max	0.35 max

Deposited Chemical Composition % (Typical)

C	Mn	Fe	Cr	Mo	Ni	Si	W
0.01	0.55	5.5	15.55	16.1	Balance	0.04	3.65

Deposited All Weld Metal Properties % (AW)

Tensile Strength	Yield Strength	Elongation	Charpy-V-Notch Impact
105,000psi	81,000psi	40%	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.

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