DURAMAX®
Inspiring the future generations of welders

Product Data Sheet

DMERCUAL-A2 Premium Aluminum Bronze Wire

Classification: ***ERCuAl-A2*** ***AWS A5.7 / ASME SFA5.7*** ***Aluminum Bronze***

Characteristics, Application or Usage:

DuraMax ERCUAL-A2 filler metal is an intermediate-strength aluminum bronze alloy used for joining Manganese Bronze castings and other Aluminum Bronze materials, malleable iron, steel and dissimilar metals. It also can be used where welds on brass are required to have high tensile strength and must be corrosion resistance. DMERCUAL-A2 is an excellent choice for building up or overlaying metal for wear and corrosion resistant surfaces. Weld deposits exhibit high mechanical properties, tensile strength, yield strength and hardness. DMERCUAL-A2 is typically used for marine maintenance and repair, wear surface reconstruction, ship propellers impellers, pump housings.

All Weld Chemical Composition (%)

Cu	Zn	Fe	Si	Al	Pb	TOE
Remainder	0.20 max	0.5 - 1.5	0.10 max	8.5 - 11.0	0.02 max	0.50 max

Typical Weld Metal Mechanical Properties:

Tensile Strength (PSI)	Yield Strength (PSI)	Elongation % in 2 inch	Reduction of Area	Hardness (Brinell)
79,000	35,000	28%	28%	130 - 150 HBW

Sizes Available and Weld Parameters:

Process	Size	Volts	AMPS	Speed/Flow	Shielding Gas / Flux
GTAW (DCEN)	1/16	---0---	70 - 120	40 - 55 CFH	100% Helium or 100% Argon
	3/32	---0---	120 - 160	40 - 55 CFH	100% Helium or 100% Argon
	1/8	---0---	170 - 230	40 - 55 CFH	100% Helium or 100% Argon
GMAW(DCEP)	0.035	20 - 36	100 - 200	45 - 55 CFH	100% Argon or 75% Argon + 25% Helium
	0.045	22 - 28	100 - 200	45 - 55 CFH	100% Argon or 75% Argon + 25% Helium
	1/16	29 - 32	250 - 400	45 - 55 CFH	100% Argon or 75% Argon + 25% Helium
	3/32	32 - 34	350 - 500	45 - 55 CFH	100% Argon or 75% Argon + 25% Helium

Preheat and Interpass Recommendations:

*Preheating copper - base alloys is frequently unnecessary provided section thicknesses are not unusually heavy.
*Preheat and Interpass temperatures will vary depending on section thickness, selected weld process and other variables.

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