DURAMAX™
Inspiring the future generations of welders

PRODUCT DATA SHEET

DMERCUAL-A1 Premium Aluminum Bronze Wire

Classification: **ERCuAl-A1**

AWS A5.7 / ASME SFA5.7

Aluminum Bronze

Characteristics, Application or Usage:

DuraMax ERCUAL-A1 is an iron-free, aluminum bronze filler metal used for Mig and Tig overlaying. It is not recommended to be used for joining purposes. Because of its moderate strength it is predominantly used for weld overlay and metallizing in automotive and other manufacturing operations. It can also be used for build-up and repair of bearing and corrosion resistant surfaces.

DMERCUAL-A1 is typically used for tube sheets, refineries, impellers, valve seats, chemical plants, and pulp mills.

All Weld Chemical Composition (%)

Cu	Zn	Mn	Si	Al	Pb	TOE
Remainder	0.20 max	0.50 max	0.10 max	6.0 - 8.5	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)
68,000	28,000	47%	53%	80 - 110 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	
"	1/8	---0---	170 - 230	40 - 55 CFH	
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	
"	1/16	29 - 32	250 - 400	45 - 55 CFH	
"	3/32	32 - 34	350 - 500	45 - 55 CFH	

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.