WELDWIRE COMPANY, INC. **Technical Information**

Copper and Copper Alloy Bare Wire

Alloy: ERCuSi-A
Class: ERCuSi-A

Conforms to Certification: AWS – A5.7
ASME SFA A5.7

Silicon Bronze

Alloy ERCuSi-A

Weld Process: Gas Metal Arc (Mig) – Gas Tungsten Arc (Tig)

AWS Chemical Composition Requirements

Cu = Remainder
Zn = 1.0 max
Sn = 1.0 max
Mn = 1.5 max
Fe =0.50 max
Si = 2.8 – 4.0
Al = 0.01 max
Pb = 0.02 max
Other = 0.50 max

Deposited All Weld Metal Properties

Tensile Strength 50,000psi

Deposited Chemical Composition % (Typical)

Dependent on weld process

Application

Use for welding of Silicon Bronze Copper, or Aluminum Bronze of low aluminum content. It can also be used for brazing malleable iron and light gauge steel.

Recommended Welding Parameters

Process	Diameter of Wire	Voltage (V)	Amperage (A)	Gas	
Tig - GTAW (DCEN)	1/16 inches x 36	---- 0 ----	70 - 120	100% Helium or 100% Argon	40 - 55 CFH
	3/32 inches x 36	---- 0 ----	120 - 160	100% Helium or 100% Argon	40 - 55 CFH
	1/8 inches x 36	---- 0 ----	170 - 230	100% Helium or 100% Argon	40 - 55 CFH
MIG - GMAW (DCEP)	.035 inches	20 – 26	100 – 200	100% Argon or 75% Argon, 25% Helium	45 - 55 CFH
	.045 inches	22 – 28	100 – 200	100% Argon or 75% Argon, 25% Helium	45 - 55 CFH
	1/16 inches	29 – 32	250 – 400	100% Argon or 75% Argon, 25% Helium	45 - 55 CFH
	3/32 inches	32 – 34	350 – 500	100% Argon or 75% Argon, 25% Helium	45 - 55 CFH

Preheat / 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.

If additional information is needed Contact Weldwire Company, Inc. 800-523-1266