Alloy: COREWELD ERCuSi-A | Class: ERCuSi-A

Silicon Bronze • Weld Process: GMAW (MIG) & GTAW (TIG)

CERTIFIED TO
AWS A5.7
ASME SFA A5.7

AWS CHEMICAL COMPOSITION REQUIREMENTS | DEPOSITED CHEMICAL COMPOSITION % (TYPICAL)

AWS REQUIREMENT (%)	
Cu	Remainder
Si	2.8 – 4.0
Zn	1.0 max
Al	0.01 max
Sn	1.0 max
Pb	0.02 max
Mn	1.5 max
Other	0.50 max
Fe	0.50 max

Dependent on weld process.

(NOMINAL) ALL WELD METAL PROPERTIES

MECHANICAL PROPERTY	
Tensile Strength	50,000 psi

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	DIAMETER OF WIRE (MM)	VOLTAGE (V)	AMPERAGE (A)	GAS	CFH
TIG — GTAW (DCEN)						
	1/16 in	1.60	0	70–120	100% Helium or 100% Argon	40–55 CFH
	3/32 in	2.40	0	120–160	100% Helium or 100% Argon	40–55 CFH
	1/8 in	3.20	0	170–230	100% Helium or 100% Argon	40–55 CFH
MIG — GMAW (DCEP)						
	.035 in	0.90	20–26	100–200	100% Argon or 75% Argon, 25% Helium	45–55 CFH
	.045 in	1.20	22–28	100–200	100% Argon or 75% Argon, 25% Helium	45–55 CFH
	1/16 in	1.60	29–32	250–400	100% Argon or 75% Argon, 25% Helium	45–55 CFH
	3/32 in	2.40	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.

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