



Aufhauser
Corporation
39 West Mall
Plainview, NY 11803
Telephone:
516-694-8696
800-645-9486
Fax:
516-694-8690

Phosphor Bronze A Electrode

◆ INTRODUCTION

Aufhauser Phosphor Bronze A Electrode is useful for welding copper tin bronzes (Cu-Sn 6-8 %) and some brasses (Cu-Zn). Also suitable for joining wrought copper-tin bronzes and brasses to cast iron and carbon steel. The PhosBronze A Electrode is recommended for repairing wrought bronzes (Cu-Sn); for surfacing on brasses, steels and cast iron. The deposit is resistant to salt water corrosion. This electrode is especially designed to weld with alternative current, but it can also be used either on DC positive or negative. PhosBronze A Electrodes may be used to weld copper if the resultant weld metal has adequate electrical conductivity and corrosion resistance for the specific application. Postweld heat treatment is desirable for maximum ductility, especially if the weld metal is cold worked.

◆ APPLICATIONS

- Joining base metals of similar composition.
- Construction of equipment for the chemical industry and petrochemical industry.
- Naval constructions and installations for sea water desalination, repair works.

◆ CHEMICAL COMPOSITION

<u>Copper</u>	<u>Zinc</u>	<u>Tin</u>	<u>Manganese</u>	<u>Iron</u>	<u>Silicon</u>	<u>Nickel</u>	<u>Phosphorus</u>	<u>Aluminum</u>	<u>Lead</u>
Remainder	*	4.0-6.0	*	0.25	*	*	.05-.35	0.01	0.02

Note: Copper contains Silver. All values are maximum percentage, unless shown in range. Total other elements = .50
* these elements must be included in total of other elements.

◆ PHYSICAL and MECHANICAL PROPERTIES

Machinability:	Excellent
Current Used:	AC or DC reverse polarity
Color:	Red bronze
Tensile Strength:	65,000 psi, max.
Elongation, in 4 in.:	20%
Brinell Hardness:	70-85

◆ SPECIFICATIONS MEET or EXCEED

- AWS A5.6 Class ECuSn-A
- ASME SFA5.6 ECuSn-A

◆ STANDARD SIZES AND DIAMETERS

<u>Diameters</u>	<u>Lengths</u>	<u>Amperage</u>
3/32	12"	70-90
1/8	14"	90-110
5/32	14"	110-130
3/16	14"	110-130

◆ COMMON BASE METALS

<u>UNS</u>	<u>DIN</u>
C 50700	CuSn2
C 51100	CuSn4
C 51900	CuSn6
C 52100	CuSn8
	CuSn6Zn
C52400	G-CuSn10

Copper and its alloys require a relatively high heat input with shortened welding time. Higher preheat temperatures and faster welding rates than for steel are necessary.

EC518: Phosphor Bronze A Electrode

www.brazing.com



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