

# COPPER BASED (BRONZE) ARC WELDING ELECTRODES



## WELCO 23

### PREMIUM MULTIPURPOSE PHOSPHOR BRONZE ELECTRODE (AC-DC)

*Applications:* WELCO 23 is a versatile, copper-base alloy for buildup and joining. When used as an overlay, it offers excellent resistance to frictional wear. It joins copper, brass, bronze and dissimilar metals. WELCO 23 is typically used for the repair of bushings, bearings, gears, propellers, impeller blades, couplings and numerous other applications.

*Procedure:* Use either AC or DC reverse polarity. Clean weld area. Preheat copper and heavy sections of cast iron. Preheat phosphor bronze castings to approximately 400°F and copper to approximately 750°F. Preheat must be maintained while welding. Use lowest current for sound weaving technique. After weld cools, slag is removed by chipping and brushing. Cool slowly.

*Features:* Tensile strength - Up to 65,000 psi  
Color matches red bronze

Frictional resistance - Excellent  
Machinability - Excellent

Sizes	Part No.	Price Per Pack	Amperage
1/8" (3.2 mm) x 14" (350 mm)	<b>PB23-18-10</b>	<b>\$229.00</b>	65-120 amps
5/32" (4.0 mm) x 14" (350 mm)	<b>PB23-532-10</b>	<b>\$227.00</b>	120-175 amps

*Packaging:* WELCO 23 is packed in ten pound sealed tubes

## WELCO 223

### SILICON BRONZE ELECTRODE (AC-DC)

AN ALL PURPOSE ARC "BRAZING" ELECTRODE WITH EXCEPTIONAL ARC STABILITY.

*Applications:* WELCO 223 is used for welding cast iron, malleable iron, galvanized iron, copper-base alloys and for joining some dissimilar alloys.

*Procedure:* Use AC or DC reverse polarity. Weld area should be clean. Heavy sections should be gouged with WELCO CHAMFER ARC or beveled by grinding. Preheat section to 400°F for best results. Clean each pass thoroughly to avoid slag entrapment. Peening the deposit will stress relieve.

*Features:* Tensile strength - Up to 65,000 psi  
Color matches yellow brasses

Sizes	Part No.	Price Per Pack	Amperage
1/8" (3.2 mm) x 14" (350 mm)	<b>SB23-18-5</b>	<b>\$109.35</b>	75-120 amps

*Packaging:* WELCO 223 is packed in a five pound tube

## WELCO 55

### ALUMINUM BRONZE ELECTRODE (DC-REVERSE)

FOR DISSIMILAR METALS, AND FOR TOUGH, WEAR-RESISTANT, MACHINABLE COPPER BASE ALLOY OVERLAYS.

*Applications:* WELCO 55 is made for tough, frictional overlays and the joining of steel, cast iron and copper alloys. It is excellent for overlaying bearing surfaces, shafts, etc. WELCO 55 is the best alloy to use on many of the aluminum bronzes. It resists corrosion, salt water, alkalis and numerous acids.

*Procedure:* Use DC reverse polarity. Weld area must be clean and beveled. Copper alloys and heavy sections of steel or cast iron should be preheated to 250°-300°F. Use stringer beads or weaving technique. Provide ample ventilation. Tilt electrode 10° to 15° off perpendicular. Chip and brush slag between deposits.

*Features:* Tensile strength - Up to 65,000 psi  
Elongation - 27% in 2"  
Hardness as deposited -Approx. 120 Brinell  
Work hardens up to 160 Brinell

Corrosion resistance - Excellent  
Frictional resistance - Excellent  
Machinability - Excellent

Sizes	Part No.	Price Per Pack	Amperage
1/8" (3.2 mm) x 14" (350 mm)	<b>AB55-18-5</b>	<b>\$135.80</b>	85-130 amps
5/32" (4.0 mm) x 14" (350 mm)	<b>AB55-532-5</b>	<b>\$134.60</b>	120-160 amps

*Packaging:* WELCO 55 is packed in five pound tubes