

Crown ALB-20

Shielded Metal Arc Welding
(SMAW) Stick Electrode

DC reverse only
(DCEP)

Copper Based Alloy



"The Royal Line"

CROWN ALLOYS COMPANY

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Universal Aluminum Bronze Electrode for a Wide Variety of Ferrous and Nonferrous Metals

Typical Applications

Crown ALB-20 is a versatile, universal and highly alloyed bronze electrode used to weld a wide variety of ferrous and non-ferrous metals. This alloy is used to join aluminum bronze, high strength copper-zinc alloys, silicon bronze, copper-nickel alloys, manganese bronze, tin bronze (phosphor bronze), cast and malleable iron, high and low carbon steels, tool steels, stainless steel and some nickel alloys **to themselves and each other!**

Crown ALB-20 is also designed for surfacing wear resistant and corrosion resistant bearing surfaces. This alloy is commonly used to repair and maintain bearings, bushings, pump housings, hydraulic pistons, brake drums, paper mill rolls, motor bases, valve seats, gears, press rams, ship propellers & turbine runners.

Specifications

- Alloy Type AWS A5.6 and AWS A5.13
E CuAl-A2
- Tensile Strength Up to 89,000 PSI (on steel)
Up to 77,000 PSI (on aluminum bronze)
- Yield Strength Up to 35,000 PSI
- Elongation in 2" 27%
- Hardness 110 - 130 Brinell

Procedure

Clean base metal thoroughly. Joint designs are similar to those used with steel except the angles are opened further. Use direct current electrode positive (dcep) and hold a short arc. Stringer or weave beads may be used in joining. To deposit a weave bead, oscillate the electrode approximately three times the electrode diameter, hesitating at the sidewalls to fill undercutting. For overlays, apply the first layer using low amperage to minimize base metal dilution. Best results are obtained when three layers are deposited. When welding ferrous to non-ferrous metals, arc blow **may** occur to the iron-base metal side of the joint. To prevent this, increase the interpass temperature of the copper alloy side until the arc passes to both metals equally. **Crown ALB-20** is recommended for flat and horizontal welding only.

Metal to be welded	Preheat and Interpass Temperatures
Carbon Steels up to 0.29% carbon	No preheat required
Carbon Steels between 0.29% to 0.60% carbon	300°F to 600°F preheat depending on the carbon content
Cast Iron	300°F to 400°F preheat (slow cool)
Aluminum Bronze up to 10% aluminum	no preheat - 300°F interpass temperature (maximum)
Aluminum Bronze exceeding 10% aluminum	300°F preheat - 600°F interpass temperature (maximum)
Manganese Bronze	500°F preheat
Copper	1000°F preheat

Sizes, Volts, Amps and Part Numbers

Diameter	Amperage*	Part Numbers	
	(dcep)	1 lb package	5 lb package
1/8	80 - 160	CEALB2/EO-BP	CEALB2/EO

*Use low side of range for iron or nickel based alloys; middle of range for bronze alloys; high side for copper



!!!! WARNING !!!!



WELDING FUMES AND GASES CAN BE DANGEROUS TO YOUR HEALTH.

BEFORE USING THIS PRODUCT THE WELDER (END-USER) MUST READ AND UNDERSTAND THE COMPLETE PRODUCT WARNING LABEL AND THE NEW 16 SECTION SAFETY DATA SHEET (SDS).

THE SAFETY DATA SHEET (SDS) WHICH OUTLINES THE POTENTIAL HEALTH HAZARDS AND SAFETY INFORMATION RELATED TO THIS PRODUCT CAN BE DOWNLOADED FROM THE SDS PORTION OF THIS WEBSITE. IT IS ALSO AVAILABLE FROM YOUR EMPLOYER AND WELDING SUPPLY DISTRIBUTOR.

DO NOT PROCEED WITH USE OF THIS PRODUCT UNTIL YOU READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) AND PRODUCT WARNING STATEMENT.

BE SURE TO CONSULT THE LATEST VERSION OF THE SDS.

SEE THE PRODUCT WARNING LABEL AND SDS FOR COMPLETE WARNING INFORMATION.

