



Aluminum Bronze A-2 Alloy 618



Description: Weldcote Metals Aluminum Bronze A-2 is an ironbearing MIG and TIG filler metal used for joining aluminum bronze of similar composition, silicon and manganese bronze, high strength copper-zinc alloys, some copper-nickel alloys, ferrous metals and dissimilar metals. Dissimilar metal combinations would include aluminum bronze to steel and copper to steel. Weldcote Metals Aluminum Bronze A-2 is excellent for building up or overlaying metal for wear and corrosion resistant surfaces. Weld deposits exhibit high mechanical properties, tensile strength, yield strength and hardness. Most common applications would include marine maintenance and repair welding of ship propellers; pump housings, rigging jacks, piston heads, bearings and many overlay or surfacing applications.

Specifications: ANSI/AWS A5.7 & ASME SFA 5.7 ERCuAl-A2

NOMINAL COMPOSITION:

Silicon	.10 % max.	Aluminum	8.0-11.0 %
Lead	.02 % max.	Zinc	.02 % max
Copper	Balance	Iron	1.5 % max
Others	.50 % max.		

PHYSICAL PROPERTIES:

Melting Point	1915 °f (1046 °C)	Reduction of area	28 %
Yield Strength	35,000 psi	Tensile Strength	79,000 psi
Elongation	28 %	Brinell Hardness	140 HB

RECOMMENDED WELDING PARAMETERS:

***GMAW(MIG) Parameters** (DC Reverse Polarity) Electrode Positive Spray transfer

<u>Wire Diameter</u>	<u>Amps</u>	<u>Volts</u>	<u>Argon (cfh)</u>	<u>Wire Feed ipm</u>
.030	80-140	25-26	25	340-450
.035	130-200	26-27	30	280-400
.045	185-245	27-28	30	200-300
1/16	250-400	28-30	40	150-210

***GTAW(Tig) Parameters** (DCSP) ² Electrode negative or ACHF

<u>Material</u>	<u>2%Thoriated ²</u>	<u>Filler Wire Size</u>	<u>Amps (DC)</u>	<u>Amps (AC)</u>	<u>Gas Cup</u>	<u>Argon(cfh)</u>
1/16"	1/16"	1/16"	80-120	80-120	3/8-1/2	15
3/32"-1/8"	3/32"	3/32"	145-205	145-195	7/16-1/2	15
3/16"	1/8"	3/32"-1/8"	300-350	255-300	7/16-1/2	20
1/2"	3/16"	1/8"	515-640	340-485	1/2	25

***All parameters are suggested as guidelines and will vary depending on joint design, number of passes and other factors.**

Weldcote Metals believes this data to be accurate and to reflect qualified expert opinion regarding current research. However, Weldcote Metals can not make any expressed or implied warranty as to this information.