ALUMINUM BRONZE A2
Welding Wire and Rod

U.S. ALLOY CO.
dba Washington Alloy
7010-G Reames Rd.
Charlotte, NC 28216
www.weldingwire.com

WA. ALLOY CO.

Quality Management System
in accordance with
ISO 9001:2000
Cert # 05-R0925

American Welding Society
Sustaining Company Member

GAWDA
GASES AND WELDING DISTRIBUTORS ASSOCIATION

ALLOY DESCRIPTION AND APPLICATION;

Washington Alloy Aluminum Bronze A2 is a copper based filler metal containing about 1% iron used for gas-tungsten arc welding and gas-metal arc welding of copper, copper-nickel, brass, bronze, steel, galvanized steels and also cast iron. Most common applications would include marine maintenance and repair, ship propellers, pump housing, rigging jacks, piston heads, bearings and excellent for build-up or overlaying wear/corrosion resistance applications. Combinations of Copper or Aluminum Bronze base metals to steel are very common with this filler. Exhibits high mechanical properties and hardness.

TYPICAL GMAW WELDING PROCEDURES; DCEP Spray transfer

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Argon (cfh)
0.023	460-580	60-120	21-22	20-25
0.030	450-525	130-160	21-24	20-30
0.035	385-455	155-190	23-25	25-30
0.045	275-310	210-235	26-28	30-35
1/16	150-240	250-310	27-31	35-40

TYPICAL GTAW WELDING PROCEDURES; DCEN with EWTh-2 truncated conical tip

Filler Wire Size	Tungsten	Amps	Volts	Gas Cup Size	Argon (cfh)	Base thickness
1/16”	1/16”	80-170	12	3/8-1/2”	20	1/16-1/8”
3/32”	3/32”	140-275	12	3/8-1/2”	20	1/8- 3/16”
1/8”	1/8”	200-375	12	1/2”	25	1/4-3/8”
1/8-5/32”	3/16”	260-475	12	1/2-3/4”	30	3/8-1/2”

Procedures may vary with change in position, base metals, filler metals, equipment and other changes.
Copper base may need preheat and high side of range, Bronze base may need preheat and mid-high side of range, Steels preheat per carbon content

CHEMICAL COMPOSITION REQUIRMENT (%) AND PHYICAL PROPERTIES;

Zinc	0.02	Solidus	1904° F
Iron	1.50	Liquidus	1913°F
Silicon	0.10	Electrical Conductivity	13.0% (% of IACS)
Aluminum	8.5-11.0	Density (lbs/in^3)	0.272
Lead	0.02	Thermal Conductivity	37.0 Btu
Copper	Remainder	Elongation	28 %
		Tensile Strength (psi)	60-80,000
Brinell Hardness	135-145	Yield Strength (psi)	35-43,000

All single values on composition are maximum percentages & Total others elements 0.50

AVAILABLE SIZES: TCU AB = Spools of .030, .035, .045, 1/16
TCU AB Cut lengths of .035, .045, 1/16, 3/32, 1/8, 5/32, 3/16
Other sizes available – please inquire

SPECIFICATIONS; **ANSI/AWS** A5.7 ERCuAl-A2
ASME SFA 5.7 ERCuAl-A2 : F-36, A-NA

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