Inweld Aluminum Bronze A-1

Alloy 610 UNS/CDA C61000
AWS A5.7 Class ERCuAl-A1
ASME SFA 5.7 ERCuAl-A1
QQ-C-450

Inweld® Welding Alloys & Supplies

Description and Applications:

Inweld Aluminum Bronze A-1 is an iron-free aluminum bronze alloy used for overlay welding on bearing and wear-resistant surfaces exposed to corrosive media such as salt or brackish water and many commonly used acids in varying concentrations and temperatures. Inweld Aluminum Bronze A-1 is used for MIG or TIG welding, but this alloy is not recommended for joining. Common applications include tube sheets, valve seats, impellers, pulp mills, pickling hooks and in refinery equipment.

Chemical Composition of Aluminum Bronze A-1

Cu	Zn	Si	Al	Pb	Mn	Total Other(s)
Balance	0.20	0.10	6.0-8.5	0.02	0.50	0.50

Single values are maximum unless otherwise specified.

Approximate Melting Temperature: 1898 F (1036 C)
Average As-Welded Brinell Hardness: 80-110
Tensile Strength: 55,000 psi (380 MPA)

Recommended Welding Parameters:

	Wire Diameter	Voltage*	Amperage*
GMAW (DCRP – Electrode +)	0.035“	20-26	100-200
100% Argon or a 75 – 25%	0.045“	22-28	100-350
Argon / Helium mixture	1/16“	29-34	250-400
.	3/32“	32-34	350-500
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GTAW (DCSP – Electrode -)	1/16“	70-120	70-150
ACHF using 100% Ar or He	3/32“	120-160	140-230
2% Thoriated, 2% Ceriated or	1/8“	170-230	225-320
2% Lanthanum Tungsten Electrode	5/32“	220-280	175-300
.	3/16“	280-330	200-320

*Use low range for iron or nickel-based alloy’s, middle range for bronze alloys and high range for copper.