# Inweld Aluminum Bronze A-2 Electrode

AWS A5.6 ECuAl-A2

## Chemical Composition of Inweld Aluminum Bronze A-2 Electrode

| Fe | C | Cr | Ni | Mo | Mn | Si | P | S | Others | Cu |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.50 | 8.50-11.0 | --- | --- | --- | --- | 1.50 | --- | --- | 0.50 | Balance |

Single values are maximum unless otherwise specified.

## Description and Applications

Inweld Aluminum Bronze-A2 is a copper based flux coated electrode specifically designed for overlays exposed to frictional wear or corrosives including salt water, alkalis and some acids. This Inweld electrode is ideal for cast iron, bronze to steel, silicon bronze, manganese bronze and aluminum bronze. Also used on malleable iron, galvanized iron, stainless steel and as a build-up on bearing surfaces. Some common applications include foundry flasks, bushings, bearings, valve seats, press rams, yokes, mixer arms, brake drums, hydraulic pistons, pickling hooks, ship propellers motor bases, impellers and so much more.

## Procedure

Clean and prepare the weld area. Bevel the heavy sections. Preheat copper base alloy and heavy sections of steel or cast iron at 250°F to 400°F, depending on the thickness of the part being worked on. Use the DC reverse polarity (electrode +). Holding the electrode 10°-15° off perpendicular, maintain a short arc length and apply thin layers using stringer beads or the weaving technique. Afterwards, allow the part to cool slowly. Use and Inweld chipping hammer and brush to remove slag between passes.

## Typical Weld Metal Properties

| | AWS Spec |
|---|---|
| Average As-Welded Brinell Hardness: | 130-150 |
| Tensile Strength: | 77,000 psi |
| Yield Strength: | 35,000 psi |
| Elongation: | 27% |

## Recommended Parameters

GMAW (DC Reverse Polarity – Electrode+) Flat and Horizontal Position Electrode

| Wire Diameter | Amperage |
|---|---|
| 1/8” | 90-120 |
| 5/32” | 115-150 |
| 3/16” | 140-210 |