Castolin Eutectic®
Eutectic Castolin

Welding Aluminum Bronzes and Dissimilar Metal Joining of Copper Alloys to Steels and Cast Irons

Xuper® 1851 XHD

- Good crack and corrosion resistance
- Excellent comparative mechanical properties
- High deposition rates

Xuper® 1851 XHD

Xuper 1851 XHD is a copper-based filler rod for the joining and cladding of aluminum bronzes or dissimilar combinations of Aluminum-bronze to some steels and cast irons. Its special formulation inhibits inter-granular stress corrosion known to cause cracking in copper alloys and steels. As cladding it exhibits all the benefits of Al-bronze itself and a high deposition rate saves time and money in any application where it is used.

TECHNICAL DATA

Typical Values	
Tensile Strength:	80,000 psi (550 N/mm²)
Yield Strength:	37,000 psi (255 N/mm²)
Hardness:	150 BHN
Work Hardened Hardness:	200 BHN
Current and Polarity:	DCEP (+)

SUGGESTED WELDING PARAMETERS:

Diameter	Amperage
1/8" (3.2mm)	90 - 160

Note: For optimum results use the lowest amperage practical.

PROCEDURE FOR USE

PREPARATION: Remove all contaminants, particularly oil and grease. Lightly grind surfaces to remove superficial oxides. Prepare cracks to have a 60-75° V-groove. A root opening of 1/8-in. is recommended. If necessary, preheat to remove moisture.

TECHNIQUE: Use either stringer or weave beads with the latter being preferred to minimize slag entrapment. Make sure to thoroughly de-slag between passes.

Note: High frequency AC recommended for application thinner than 0.040 or where additional weld puddle cleaning is needed.

Note: Make sure that the inter-pass temperature does not exceed 300°F (148°C)

POST-WELDING: Slow cool out of the way of drafts.

TYPICAL APPLICATIONS

- Aluminum Bronze Pump Housings
- Manganese Bronze Impellers
- Ship Propellers
- Turbine Runners
- Press Rams
- Joining Cast Iron to Steel
- Tin Plate Mill Rolls
- Hydraulic Pistons

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Eutectic Corporation:
N94 W14355 Garwin Mace Dr.
Menomonee Falls WI, 53051 USA
+1 800. 558. 8524 • eutectic.com

Eutectic Canada:
428, rue Aimé-Vincent, Vaudreuil-Dorion,
Québec J7V 5V5 Canada
+1 800. 361. 9439 • eutectic.ca

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