



Aufhauser Corporation
 39 West Mall
 Plainview, NY 11803
 Telephone:
 516-694-8696
 800-645-9486
 Fax: 212-246-0158
 sales@brazing.com

Manganese Nickel Aluminum Bronze Electrode

◆ INTRODUCTION

Aufhauser EC633 – Manganese Nickel Aluminum Bronze Electrode - is a basic coated manganese bronze electrode (Cu Mn Al Ni Fe) for welding and surfacing of aluminum bronzes and for dissimilar joints between steels and copper alloys. It is also recommended for overlays on cast iron, steels and copper alloys. Excellent welding characteristics, stable arc, low spatters, very easy slag removal. Low anti-friction properties of the deposit make EC633 an excellent choice for overlaying on sliding guides.

◆ APPLICATIONS

- Joining or repairing cast or wrought manganese-nickel-aluminum bronze materials.
- Naval constructions, seawater applications and chemical industry (pumps, propellers, etc).

◆ CHEMICAL COMPOSITION

<u>Copper</u>	<u>Zinc</u>	<u>Tin</u>	<u>Manganese</u>	<u>Iron</u>	<u>Silicon</u>	<u>Nickel</u>	<u>Aluminum</u>
Remainder	*	*	11.0 - 14.0	2.0 - 4.0	1.5	1.5 - 3.0	7.0 - 8.5

Note: Copper contains Silver. All values are maximum percentage, unless shown in range. Total other elements = .50
 * These elements must be included in total of other elements.

◆ PHYSICAL and MECHANICAL PROPERTIES

Tensile Strength	95,000 psi 75,000 psi (min.)
Yield Strength	56,000 psi
Elongation, in 2 in.	27%
Brinell Hardness	160-200

◆ SPECIFICATIONS MEET or EXCEED

- AWS A5.6 Class ECuMnNiAl
- ASME SFA5.6 Class ECuMnNiAl
- MIL-E-23765/3

◆ STANDARD SIZES AND DIAMETERS

<u>Diameters</u>	<u>Lengths</u>	<u>Amperage</u>
3/32	12"	60-80
1/8	14"	80-100
5/32	14"	90-120
3/16	14"	90-130

◆ COMMON BASE METALS

<u>UNS</u>	<u>DIN</u>
C62300	CuAl10Fe3Mn2
C63000	CuAl10Ni5Fe4
	G-CuAl10Fe
	CuAl9Mn2
	G-CuAl8Mn

Copper and its alloys require a relatively high heat input with shortened welding time. Higher preheat temperatures and faster welding rates than for steel are necessary.