

Prepared by David P	Qualified by Siva P	Approved by Umesh M	Reg no EN1060052	Cancelling EN1060051	Reg date 2023-09-22	Page 1 (2)
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GENERAL

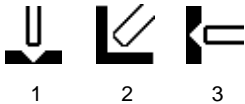
Non-ferrous electrode for welding applications requiring high purity copper deposits. Also recommended for welding of all copper grades (oxygen-free, phosphorous deoxidised, refined, high conductivity etc.). Weld metal exhibits higher thermal and electrical conductivities. Suitable for copper-cladding of ferrous materials and for joining copper to steels. Excellent resistance to atmospheric and marine corrosion. Typical applications include, electrical bus bars, switch gear, transformers, generators, evaporator shells, distillation columns, cooling pans, heat exchanger, boilers, steam coils, high pressure conduits etc.

Polarity: DC+

Alloy Type: Copper

Coating Type: Basic

WELDING POSITIONS



CLASSIFICATIONS Electrode

APPROVALS

SFA/AWS A5.6: ECu

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max
Mn	0	0.1
Si	0	0.1
Fe	0	0.2
Al	0	0.1
Pb	0	0.01
Others (Zn, Sn, Ni, Co, P)	0	0.50
Cu	Balance	

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MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO		AWS	
	As welded Min	Typ	As welded Min	Typ
Rp0.2 (MPa)				
Rm (MPa)			130	150
A4 (%)				
A5 (%)				
Z (%)				
Charpy V at 20°C (J)				

Comments:

Conductivity: 80% IACS

CURRENT DATA

Dimension (mm)	Current (A)	
	Min	Max
∅ x Length		
3.15 x 350	80	130
4.00 x 450	130	170

OTHER DATA

Ensure the surfaces to be welded are free from oxides, corrosion and contamination. The high thermal conductivity of copper dissipates heat from the weld area rapidly, causing lack of fusion or porosity in the welds. Therefore, preheating of large parts to 400 – 600 Deg C is recommended. Use DC positive polarity for the electrode. Weld with short arc and weaving technique. Chip slag between passes and wire brush deposit. Peen welds in red-hot condition to minimize residual stresses.

Redrying: 200°C, 2h.