

OVERVIEW

MEI-110 (Cu-ETP) is the standard commercial wrought copper with 100% IACS electrical conductivity. The industry standard for sheet, strip, wire and rod across electrical engineering, stamping, transformer coils and heat sink applications.

CHEMICAL COMPOSITION (wt. %)		ALLOY DESIGNATIONS		COIL / SHEET SPECIFICATIONS	
Element	Composition (%)	Standard	Designation	Specification	Range
Cu	≥99.90	IS	IS 191/14811/1897	Thickness (mm)	0.04 – 3.0
O	0.005 – 0.040	ASTM	C11000	Width (mm)	6.00 – 406
		BS 2870	C101	Inner Dia. (mm)	100/150/200/300/400/500
		EN 1652	CW004A	Coil Wt. (kg/mm)	1.0 – 4.0
		JIS 3100	C1100	Sheet Length (m)	0.50 – 4.00

MECHANICAL PROPERTIES — typical values at 20°C

Temper	HV	Tensile MPa	Elongation % (min)
Annealed	≤55	≥195	≥35
1/4 Hard	55–75	≥215	≥25
1/2 Hard	75–90	≥240	≥15
Hard	≥90	≥274	—
Extra Hard	≥110	≥340	—

PHYSICAL PROPERTIES — annealed temper at 20°C

Density (g/cm³)	Elec. Conductivity (% IACS)	Thermal Conductivity (W/m·K)	Modulus of Elasticity (GPa)	Specific Heat (J/kg·K)
8.94	100	388	127	385

FABRICATION PROPERTIES

Fabrication Property	Rating	Fabrication Property	Rating
Capacity for Cold Working	Excellent	Soft Soldering	Excellent
Machinability	Less suitable	Resistance Welding	Less suitable
Electroplating	Excellent	Gas Shielded Arc Welding	Less suitable
Hot Dip Tinning	Excellent	Laser Welding	Less suitable

CORROSION RESISTANCE

MEI-110 is generally less subject to corrosion than other engineering metals. Resistant to industrial atmosphere, industrial and drinking water (max flow 4.5–6.0 ft/s), pure water vapour, non-oxidizing acids, alkalis (except ammonia/cyanide compounds) and neutral saline solutions. Not resistant to oxidizing acids, hydrous ammonia, halogenated gases or seawater at high flow rates.

TYPICAL APPLICATIONS

• General electrical applications and stamped parts	• Transformer coils and cable strips
• Heat sinks and thermal management components	• Busbars and electrical connectors