

OVERVIEW

MEI-70 (Cartridge Brass) offers excellent cold forming with outstanding ductility, good hot forming properties and excellent soldering and brazing characteristics. The benchmark alloy for deep drawing, ammunition and precision stamping applications.

CHEMICAL COMPOSITION (wt. %)		ALLOY DESIGNATIONS		COIL / SHEET SPECIFICATIONS	
Element	Composition (%)	Standard	Designation	Specification	Range
Cu	69.00 – 71.00	IS	IS 410	Thickness (mm)	0.04 – 3.0
Fe	≤0.05	ASTM	C26000	Width (mm)	6.00 – 406
Pb	≤0.05	BS 2870	CZ106	Inner Dia. (mm)	100/150/200/300/400/500
Ni	≤0.10	DIN 17660	2.0265	Coil Wt. (kg/mm)	1.0 – 4.0
Zn	Rem.	EN 1652	CW505L	Sheet Length (m)	0.50 – 4.00
		JIS 3100	C2600		

MECHANICAL PROPERTIES — typical values at 20°C

Temper	HV	Tensile MPa	Elong. %	Grain Size mm
Annealed	≤80	≥275	≥50	0.035–0.100
1/4 Hard	75–100	320–345	≥35	0.015–0.050
1/2 Hard	100–125	345–405	≥20	≤0.015
Hard	≥125	≥405	≥5	≤0.010
Extra Hard	≥150	≥480	—	≤0.005
Spring Hard	≥185	≥655	—	≤0.005

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)
8.53	28	126	115	377

FABRICATION PROPERTIES

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

CORROSION RESISTANCE

MEI-70 has very good resistance to water, water vapor, different saline solutions, many organic liquids and industrial atmosphere. Under cold formed temper this alloy may tend to stress corrosion cracking with hydrous ammonia environment; heat treatment can effectively prevent this.

TYPICAL APPLICATIONS

• Terminal connectors, flashlight shells, lamp fixtures	• Odometer contacts, heater cores, thermostats, radiator cores and tanks
• Ammunition cartridge cases and mechanical housing	• Jewelry and metal goods