

OVERVIEW

MEI-60 (Muntz Metal) is an economical high-zinc brass with good forming properties and excellent hot workability. It offers superior mechanical strength among standard brasses and is widely used for valve stems, condenser tubes, hot forgings and architectural components.

CHEMICAL COMPOSITION (wt. %)		ALLOY DESIGNATIONS		COIL / SHEET SPECIFICATIONS	
Element	Composition (%)	Standard	Designation	Specification	Range
Cu	59.00 – 61.00	IS	IS 410	Thickness (mm)	0.04 – 3.0
Fe	≤0.070	ASTM	C28000	Width (mm)	6.00 – 406
Pb	≤0.100	BS 2870	CZ109	Inner Dia. (mm)	100/150/200/300/400/500
Ni	≤0.100	DIN 17660	2.0360	Coil Wt. (kg/mm)	1.0 – 4.0
Zn	Rem.	EN 1652	CW509L	Sheet Length (m)	0.50 – 4.00
		JIS 3100	C2801		

MECHANICAL PROPERTIES — typical values at 20°C

Temper	HV	Tensile MPa	Elong. %	Grain Size mm
Annealed	≤85	≥275	≥30	0.035–0.100
1/4 Hard	85–100	350–420	≥20	0.015–0.050
1/2 Hard	100–125	420–490	≥12	≤0.015
Hard	125–155	≥490	≥5	≤0.010
Extra Hard	160–180	≥565	—	≤0.005
Spring Hard	—	—	—	≤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)
8.39	22	116	105	375

FABRICATION PROPERTIES

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

CORROSION RESISTANCE

MEI-60 has very good resistance to water, water vapor, different saline solutions, many organic liquids, land, sea and industrial atmosphere. It offers better resistance to sulphur bearing compounds than high copper alloys. This alloy tends to stress corrosion cracking — heat treatment can help avoid it.

TYPICAL APPLICATIONS

• Locks, metal fittings and keys	• Condenser tubes, valve stems, heat exchanger tubes
• Hot forgings, bolts and decorative hardware	• Architectural components and facades