

OVERVIEW

MEI-65 (Yellow Brass) is the major brass alloy for cold forming processes. Its excellent forming properties satisfy the demands of many industrial applications, making it the most widely used brass strip for connectors, springs and stamped components.

CHEMICAL COMPOSITION (wt. %)		ALLOY DESIGNATIONS		COIL / SHEET SPECIFICATIONS	
Element	Composition (%)	Standard	Designation	Specification	Range
Cu	64.00 – 66.00	IS	—	Thickness (mm)	0.04 – 3.0
Fe	≤0.05	ASTM	C27000	Width (mm)	6.00 – 406
Pb	≤0.05	BS 2870	CZ107	Inner Dia. (mm)	100/150/200/300/400/500
Ni	≤0.10	DIN 17660	—	Coil Wt. (kg/mm)	1.0 – 4.0
Zn	Rem.	EN 1652	—	Sheet Length (m)	0.50 – 4.00
		JIS 3100	C2680		

MECHANICAL PROPERTIES — typical values at 20°C

Temper	HV	Tensile MPa	Elong. %	Grain Size mm
Annealed	≤80	≥275	≥40	0.035–0.100
1/4 Hard	75–110	335–380	≥30	0.015–0.050
1/2 Hard	110–135	380–450	≥15	≤0.015
Hard	135–165	450–515	≥5	≤0.010
Extra Hard	165–185	515–660	—	≤0.005
Spring Hard	≥185	≥660	—	≤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)
8.47	27	116	110	380

FABRICATION PROPERTIES

Fabrication Property	Rating	Fabrication Property	Rating
Capacity for Cold Working	Excellent	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-65 has good corrosion resistance to water, water vapor, different saline solutions, many organic liquids, land, sea and industrial atmosphere. Not resistant to acids, hydrous sulphur compounds or hydrous ammonia in non-stress relieved conditions. Heat treatment can help avoid stress corrosion cracking.

TYPICAL APPLICATIONS

• Radiator cores and tanks	• Socket shells, flashlight shells, lamp fixtures, reflectors
• Springs, chain and bead chain	• Connectors and stamped parts