



Estd. 1935

CuZn 40

ALLOY NAME

UNS	IS/ISO	DIN CEN/TS 13388	KMW
C28000	CuZn40	CW617N	CuZn40

Chemical Composition	(% By Weight)	Main Applications	
Cu	58.5 – 62.0 %	Industrial	Locks, Metal Fittings, Keys.
Pb	≤ 0.1 %	Architecture	Decoration, Hardware, Door Frames, Large Architectural Trim, Large sheet.
Fe	≤ 0.1 %		
Zn	Reminder %		
Total Impurity	< 0.75 %		

Physical Properties Typical values in annealed temper at 20 Â°C

Density	8.41	g/cm ³
Thermal expansion coefficient -191 .. 16 / 0 .. 300°C	20.3 / 21.0	10-6/K / 10-6/K
Specific heat capacity	0.375	J/(g•K)
Thermal conductivity	117	W/(m•K)
Electrical conductivity (1 MS/m = 1 m/(O mmÂ²))	≥ 15	MS/m
Electrical conductivity (IACS)	26	%
Thermal coefficient of electrical resistance (0 .. 200 C)	1.7	10-3/K
Modulus of elasticity (1 GPa = 1 kN/mmÂ²) cold formed	99....115 / 102	GPa / GPa

Mechanical Properties (EN 1652)

Temper	Tensile Strength Rm MPa (N/mm ²)	Yield Strength Rp0.2 MPa (N/mm ²)	Elongation Minimum A50mm %	Hardness HV
O (SOFT)	275 Min	–	35 Min	85 Max
HB (Half Hard)	420 Min	–	15 Min	100 Min
HD (Half Hard)	490 Min	–	5 Min	125 Min
HE (Extra Hard)	525 Min	–	–	165 Min

Fabrication Properties	Cold Forming Properties Max. 25% between annealings	Fair
	Hot Forming Properties at 650 .. 800°C	Excellent
	Machinability (Rating 40)	Fair
	Electroplating Properties	Excellent
	Hot Tinning Properties	Excellent
	Soft Soldering, Brazing	Excellent
	Resistance Welding	Good

