

CuSn8

ALLOY NAME

AMW - 34	IS/ISO	DIN CEN/TS 13388	UNS	JIS	KMW
CuSn8	CuSn8	CW453K	C52100	C5210	CuSn8

Chemical Composition	(% By Weight)	Main Applications	
P	0.02 - 0.40 %	Electrical	Contact Springs, Electronic Connectors, Electrical Connectors, Cold Headed Parts, Contact Blades, Wire Brushes, Switch Parts, Fuse Clips
Sn	7.5 - 9.0 %		
Pb	0.02 Max %	Fasteners	Cotter Pins, Heavy duty , Lock Washers
Zn	0.3 Max %		
Fe	0.10 Max %	Industrial	Cold Headed Parts, Thrust Bearings, Doctor Blades, Paper Industry, Bourdon Tubing, Well Drill Equipment, Perforated Sheets
Cu	Remainder %		

Physical Properties Typical values in annealed temper at 20 °C

Density	8.8	g/cm ³
Thermal expansion coefficient -191 .. 16 / 0 .. 300°C	18.0 / 18.7	10-6/K / 10-6/K
Specific heat capacity	0.377	J/(g•K)
Thermal conductivity	67	W/(m•K)
Electrical conductivity (1 MS/m = 1 m/(Ω mm ²))	≥ 6.5	MS/m
Electrical conductivity (IACS)	≥ 11	%
Thermal coefficient of electrical resistance (0 .. 200 C)	0.65	10-3/K
Modulus of elasticity (1 GPa = 1 kN/mm ²) cold formed	109 / 115	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)	345 Min	≤ 300	50 Min	100 Max
HA (Quarter Hard)	405 Min	≥ 350	40 Min	125 Min
HB (Half Hard)	475 Min	≥ 400	15 Min	175 Min
HD (Hard)	585 Min	≥ 500	5 Min	200 Min
HE (Extra Hard)	670 Min	≥ 600	2 Min	220 Min
HS (Spring Hard)	720 Min	≥ 700		240 Min

Fabrication Properties

Cold formability
Hot formability
Soldering
Brazing
Oxyacetylene welding
Gas shielded arc welding

Excellent
Not Recommended
Excellent
Excellent
Fair
Good