

Alloy Designation	
EN	CuSn8
DIN CEN/TS 13388	CW453K
UNS	C52100

Chemical Composition (Balance)		
Weight percentage		
Cu	Rest	%
Sn	8	%
P	0.1	%

Characteristics
CuSn8 strips provide a better corrosion resistance compared to bronze with lower tin-content, combined with higher strength and good slip properties. It is wear resistant, has excellent spring properties, good cold forming and soldering properties.

Main Applications
Stamped parts, Connectors, Contact springs, Spring elements, Ultra high strength spring elements, Membranes, Switch elements, Fixed contacts.

Mechanische Eigenschaften (EN 1652)						
Temper	Tensile Strength	Yield Strength Standard	Yield Strength Bending optimized	Elongation Bending optimized min.	Hardness * HV	Bendability 90°
	Rm	Rp _{0.2}	Rp _{0.2}	A _{50mm}	HV	gw rel. Bending Radius R/T
<small>* Only information ** Thickness 0.15 - 0.60 mm</small>	MPa	MPa	MPa	%	HV	Banddicke ≤ 0.50mm
R370	370 .. 450	≤ 300 *			80 .. 120	0 0
R450	450 .. 550	≥ 370	≥ 350	35	120 .. 175	0 0
R540	540 .. 630	≥ 460	≥ 440	27	170 .. 200	0 0
R600	600 .. 690	≥ 520	≥ 480	20	180 .. 210	0 0
R660	660 .. 750	≥ 600	≥ 580	14	210 .. 240	0 2
R740	740 .. 810	≥ 680	≥ 660	8	210 .. 260	2 3
R800 **	800 .. 930	≥ 720	≥ 700	-	230 .. 290	- -
R850 **	≥ 850	-	≥ 800	-	≥ 240	- -

Physical Properties			
Typical values in annealed temper at 20 °C			
Density		8.96	g/cm ³
Thermal expansion coefficient	20 .. 300 °C	18.0	10 ⁻⁶ /K
Specific heat capacity		0.377	J/(g·K)
Thermal conductivity		67	W/(m·K)
Electrical conductivity	MS/m	6.5	MS/m
Electrical conductivity	IACS	11	%
Thermal coefficient of electrical resistance	(0 .. 100 °C)	0.065	10 ⁻³ /K
Modulus of elasticity	GPa	109	GPa

Fabrication Properties *	
Cold Forming Properties	Excellent
Machinability (Rating 20)	Less suitable
Electroplating Properties	Excellent
Hot Tinning Properties	Excellent
Soft Soldering, Brazing	Excellent
Resistance Welding	Good
Gas Shielded Arc Welding	Good
Laser Welding	Good

* For more details call our technical service

Due to continuous improvements within our production process, the details given in our brochure cannot be guaranteed. We reserve the right to update or change our products without prior notice. We recommend that you seek confirmation of our product details / specifications before committing to specific alloys.