

3.11 CuSn6 - C51900 - CW452K

Application Range												
Contact springs, connectors, membranes, switch elements, fixed contacts. Ultra-high strength spring elements												
Physical Properties							Chemical Position (reference value) %					
Density *	g/cm ³		8.8		Cu		Rest					
Thermal conductivity *	W/(m·K)		75		Sn		5.5 - 7.0					
Electr. conductivity ***	MS/m		7.5		P		0.01 - 0.4					
Electr. conductivity ***	IACS (%)		13									
Thermal expansion c. **	10 ⁻⁶ K		18.5									
Modulus of elasticity *	Gpa		118									
Condition	Temper class	Tensile strength T.S. min. - max. MPa	Yield strength Rp 0.2		Elongation A50 min. %		Hardness (reference value) HV	Electr. Conductivity MS/m	Bendability 90° ^{1) 2) 3)} Strip thickness ≤ 0.5mm R/t			
			min. MPa 3)	min. MPa 4)	min. % 3)	min. % 4)			GW		BW	
									Stretch leveled	Thermal stress relieved	Stretch leveled	Thermal stress relieved
Cold rolled	R350	350 - 420	max. 300		45		80 - 120	7.5	0	0	0	0
Cold rolled	R420	420 - 520	350	340	22	29	120 - 170	7.5	0	0	0	0
Cold rolled	R500	500 - 590	450	410	15	22	160 - 190	7.5	0	0	0	0
Cold rolled	R560	560 - 650	520	490	10	15	180 - 210	7.5	0	0	0	0
Cold rolled	R640	640 - 730	590	570	5	12	200 - 230	7.5	0	0	1	0.5
Cold rolled	R720	min. 720	650	620	-	4	min. 210	7.5	-	1	-	-

*Reference values at room temperature

**Between 20 and 300 °C

*** Values for the lowest temper class

¹⁾ $r = x \cdot t$ (strips up to $t = 0.50$ mm)

²⁾ Sample width = 10 mm / bending at smaller bending widths on request (Evaluation according to page 5.4.2. of Hand-Out)

³⁾ Valid only as thermal stress relieved qualities

⁴⁾ Thermal stress relieved

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